

Anaphylaxis, asthma and supplementary medicines, looking from West to East

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Anaphylaxis is a serious, systemic, hypersensitivity reaction that can be life-threatening.¹ Understanding the clinical characteristics and triggers associated to it could lead to early recognition and better management. Although the anaphylaxis in western countries is well studied, the clinical features of this condition in Asia started to be investigated just 10 years ago. Recent epidemiological studies showed that the prevalence of anaphylaxis in Asian countries was increasing, similar in extent to the trends observed in Europe.²⁻⁵ According to these studies, the most frequent organ involvement is skin, followed by respiratory, cardiovascular and gastrointestinal organs.²⁻⁴ Biphasic anaphylaxis is found at the rate of 5.3-12.5% according to studies performed in emergency services.⁶⁻⁸ Delay administration of epinephrine and the usage of more than one dose of epinephrine were found to be risk factors for developing biphasic anaphylaxis.^{7, 9, 10} In this issue, Sricharoen et al. found that the incidence of biphasic anaphylaxis was as high as 21% and that the abdominal pain and decreased respiratory rate were risk factors for this condition.¹¹

The most frequent triggering factors of anaphylaxis are food and drugs.^{2,4,6,12} Noteworthy, a high variety of dietary habits in Asia leads to unique-food triggering anaphylaxis profiles. In western countries, the leading food causing anaphylaxis is peanut.¹³ In Asian countries, the major food triggering anaphylaxis is seafood.^{2,3,8,14} Of interest, country or culture-specific food were also reported causing anaphylaxis, such as edible bird nest in Singapore, buckwheat in Korea, fried insect and wheat in Thailand.^{2,15-17} In this issue, Wongrakpanich et al. described the first case of

jackfruit anaphylaxis in a nurse patient showing latex allergy.¹⁸ The authors made an observation that jackfruit could be one of the cross-reactive fruit to latex.

Asthma is a common chronic disease and its prevalence has increased worldwide. Asthma management initiatives are designed to control asthmatic symptoms and reduce the risk for exacerbation in order to ultimately improve asthmatic patients' quality of life.¹⁹ In this issue, Boonsawat et al. performed a health survey on 400 asthmatic patients and found that 36% of them had exacerbations in the previous year, 17% were hospitalized and 35% had an unscheduled emergency visit.²⁰ These figures showed a significant burden of this disease in Thai patients despite a high number of controller usage (54%). On a related study, a worldwide survey by Rabe et al. indicate that the use of anti-inflammatory medication is generally low in asthmatic patients, ranging from 26% in Western Europe to 9% in Japan.²¹ These observations indicate that patients having controllers may be reluctant to use these medications and interpretations related to controller usage must be done with caution. Along the same line of thought, asthma control may be improved by reducing respiratory tract infection. For instance, yearly influenza vaccine is recommended for asthmatic patients. In this issue, Jaiwong et al. studied asthma related events in asthmatic children who were immunized with influenza vaccine as compared to patients who were not. The authors observed that the immunized group had a significant reduction in acute respiratory tract illness risk, asthma exacerbations, emergency room visits, bronchodilator usage, systemic steroid administrations, the number of hospitalizations and the length of stay during hospitalizations.²²

As interest in the use of dietary supplements and herbal medicine in alleviating immune deviation condition increases, scientific evidences are strongly needed to back up some of the claimed effect. In this issue, two reports on the effects of dietary product and herbal extract on immune responses were featured. Omega-3 fatty acids are essential nutrients

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found mainly in fish. Latif et al. reported that omega-3 fatty acids suppressed inflammatory response in a rat skin allergy model which was induced by trimellitic anhydride.²³ The authors showed that omega-3 fatty acids exhibited potent suppressive activity against skin mast cells and iNOS expression. Another study investigated the effect of Thai herbal medicine from *Zingiber cassumunar* Roxb. (also called Plai in Thai traditional medicine) on activation of matrix metalloproteinase 9 (MMP-9) induced by house dust mite allergens. Poachanukoon et al. revealed that the crude extract and a purified compound could suppress the cleavage of pro-MMP-9, suggesting that this folk medicine may be beneficial for treatment of house dust mite allergy.²⁴ How these results obtained in an animal model or an *in vitro* studies could be translated into a clinical application needs further investigation.

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