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Physical allergies, in terms of food and exercise

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Introduction & Aim: It is well known that physical activity is beneficial for people with positive results for physical status and mental wellbeing. However, physical exercise decreases the immune response and may induce allergy anaphylaxis at some situation as follows. A common example is exercise-induced asthma, exercise-induced urticaria, exercise-induced anaphylaxis and FDEIAN. Generally, anaphylaxis is a severe, potentially fatal, hypersensitivity reaction of rapid onset. It is a dramatic clinical emergency. Actually, there are lots of etiologic factors of anaphylaxis the principal immunologic triggers are foods, insect stings and drugs. In recent, physical exercise is also related with the anaphylaxis. In this paper, we present the current views of physiological mechanisms underlying physical anaphylaxis within the context of exercise immunology. We also deal with a detailed two kinds of EIA (exercise-induced asthma, exercise-induced anaphylaxis) and exercise prescription and medical treatment for exercise-induced asthma, exercise-induced anaphylaxis and CU (chronic urticaria).

Methods: At first, we analyzed and presented the causes, symptoms, pathophysiology, testing, treatment and prescription of exercise-induced asthma, exercise-induced urticaria, exercise-induced anaphylaxis and FDEIAN through many experiments and references.

Results: Exercise-induced asthma is a typical asthmatic attack which follows a strenuous exercise lasting 5 to 10 minutes in circumstances of dry and cold air situation. Avoid of exercise in that conditions and drug treatment (beta-2 adrenergic agonists) must preferentially be preventive. Physical urticarias are a unique subgroup of CU in which patients develop urticaria secondary to environmental stimuli. Common triggers include cold and heat temperature, water, sunlight and even physical exercise. It is responsible for approximately 20-30% of all cases of chronic urticaria. FDEIAN is induced by different types and various intensities of physical exercise, and this is distinct from food allergy. It is useful to test both *in vivo* and *in vitro* an extensive panel of foods. Avoidance of allergenic foods for at least 4 hours before exercise has prevented further episodes in all our patients with specific FDEIAN.

Conclusion: It is concluded that anaphylaxis remains a continuous challenge for the diagnosis and treatment. The adequate management of anaphylaxis requires rapid diagnosis, implementation of primary and secondary prevention measures, and immediate administration of subcutaneous epinephrine. Furthermore, patient education is necessary to heighten awareness of the sign and symptoms of two kinds of EIA and FEDIAN.

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