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A 65-year-old woman with ten-year diarrhea after eating cooked rice.

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Abstract

If allergists work together with commonweal media, common knowledge of anaphylaxis and usual allergen categories may be more familiar to most of us, patient's risk from severe anaphylaxis will be reduced greatly. Carefully to recognize illness history, recent activity, and customs in daily life is the key to diagnose an anaphylaxis. We present a 65-year-old woman with history of food allergy who presented to the emergency room and then our allergy clinic for evaluation after suffering anaphylaxis after a meal. Subsequently, examinations include skin prick test (SPT), serum specific IgE test (sIgE), total IgE test (tIgE) and bronchial relaxation test were determined. However, only SPT result showed that the patient is positive to rice, results of other tests were negative. After follow an instruction on avoidence of rice and rice made food for a period of time, long-term diarrhea was mitigated. This case illustrates that rice allergy could lead to severe diarrhea and may aggravate asthma. Hence, allergists should consider the single food factor which seem to be unimportant with a results of positive SPT but negative sIgE.

Keywords: Skin prick test; Serum specific IgE test; Rice allergy; Diarrhea

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Case Report

A 65-year-old woman with ovary removal got emphysema and severe diarrhea presented to our clinic after an allergic reaction. The patient complaint of a serious diarrhea for twenty years frequently, and ten years ago, felt worse. She always defecated more than eight times per day, and got rectocele at the worst condition. Commonly, she had pharyngeal itching, then cough with yellow phlegm. In the morning, the condition became worse. In addition, we observed that some pigmentation existed in her limb and face. Her past medications were: norfloxacin, which was used to improve diarrhea condition, but none effect; Since the ovarian cyst was removed, she always took allergy medicine, such as diphenhydramine, chlorpheniramine maleate, but they were proved to be invalid. Skin prick test showed a positive reaction to rice (3+), egg (0), milk (0), beef (0), pork (0), according to a positive control of 10 mg/ml histamine and a negative control consisting of saline. Specific IgE tests were performed for the following, with the obtained values indicated in parentheses: rice (20 IU/ml, class 4), egg (0 IU/ml, class 0), total IgE 81.2 IU/ml.

Above all, this patient was allergic to rice. Bronchial diastolic test confirmed that her lung function was poor. Our medications were: neucleotide and casein oral solution, BCG Polysaccharide and Nucleic Acid Preparation, the former was used to adjust immunity, the latter one was to control the emphysema and asthma. Besides, the most important suggestion is to follow an instruction on avoidence of rice and rice made food for a period of time. Three weeks later, the diarrhea and dyspnea were improved significantly. In addition, the pigmentation was improved slightly. Two months later, her diarrhea was completely controlled to once per day. At the same time, her pigmentation and dyspnea were got obviously improved.

Discussion

The lifetime prevalence of anaphylaxis was estimated at 0.05-2% [1]. It is mainly categorized to food allergy and inspiratory allergy. A detailed history of the anaphylactic episode is a critically important aspect of patient evaluation. But idiopathic allergic diseases are many, and hard to determined. Thus, we need to choose a physician-supervised cow's milk OFC.

Food allergy was mainly the adverse immune response of our body to some allergic protein of food. As we know, food induced anaphylaxis are usually happened in many organs such as skin, mucous membranes, respiratory tract, gastrointestinal tract and so on. And, rice allergy could cause asthma, atopic dermatitis, ocular complications, contact urticaria, diarrhoea and vomiting, eczema, sports induced anaphylaxis, enterocolitis syndrome [2,3]. In 1996, Cavataio, et al. reported a case of short term infantile diarrhea induced by rice allergy, however, long term diarrhea happened in an old man was not reported [4]. In Asia, rice is the major food and few people know that when they got diarrhea, the cooked rice she ate may

be the cause. In most of the cases, they attribute it to cool food or some other seafood.

This paper described a case of severe gastrointestinal tract allergy due to allergy of rice. Although there were reports about diarrhea several years ago, all happened in children or infants [5]. If rice cannot be completely digested by the patient, the molecules decomposed from cooked rice would be identified as a foreign substance by the body, which leads to the occurrence of a hypersensitivity reaction, resulting in a food specific IgG antibody. Combination of IgG antibody and food molecules to form immune complexes, which were deposited in different parts of the body, then causing an allergic reaction, causing diarrhea and other gastrointestinal symptoms. For adults, cases of severe diarrhea accompanied with emphysema due to cooked rice were rare. There were some allergic proteins have been reported, like albumins protein, their molecular weight (MW) range from 14 to 16 KDa. Another one is globulin, which has 19 kDa MW [6]. In the medical processes, we have verified the storage period and the quality of the rice she ate, and then we excluded OMA (oral mite anaphylaxis) which is may be correlated to. Storage period was not more than two months [7]. Usually, we thought that only not cooked food could lead to allergic reaction, however, cooked rice was also allergic, because a kind of lipid transfer protein contained in rice, which is a kind of protein stable (not easily to decomposite) when encounters heat [8,9], this could illustrate a long-term diarrhea with emphysema, for which could be accompanied with bronchial asthma [10].

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