CORRESPONDENCE

Triggers and Treatment of Anaphylaxis: An Analysis of 4000 Cases from Germany, Austria and Switzerland

by Prof. Dr. med. Margitta Worm, Oliver Eckermann, Dr. rer. medic. Sabine Dölle, et al. in issue 21/2014

Adrenaline as the Medication of Choice

Worm et al. (1) correctly explain that administration of adrenaline is the crucial therapeutic measure in anaphylactic shock. However, when reviewing the reality of the situation (*Figure 4*), almost all anaphylaxis patients are given antihistamines (H1-receptor antagonists) and glucocorticoids, but only 20% receive adrenaline. From a pharmacological perspective, it should be stressed that H1-receptor antagonists are effective particularly in urticaria, but not in asthma, cardiocirculatory failure, and edema in the orolaryngeal area (2). Adrenaline has a positive effect on all these parameters in anaphylaxis: β_2-adrenopreceptors induce bronchodilation, α_1-adrenoreceptors mediate vasoconstriction and thus a reduction in oropharyngeal edema, and β_1-adrenoreceptors support cardiac function. Adrenaline's pleiotropic effects addresses all key symptoms of anaphylaxis. The immediate onset of effect is also an important aspect of treatment with adrenaline. By contrast, the effect of glucocorticoids sets in far too slowly and is more of prophylactic value. The request articulated by Worm et al. (1), that doctors should be better trained in how to apply adrenaline for anaphylactic shock, therefore deserves wide support. For patients with repeated anaphylactic events, adrenaline autoinjectors are available (2) whose use is easy to learn and which can be applied in order to bridge the period between onset of the anaphylactic shock and the arrival of the emergency physician.

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Conflict of interest statement
The author declares that no conflict of interest exists.

Not All Legumes Are Triggers

In my opinion, the conclusion is unfortunately formulated with the term "pulses." The food group around pulses includes a multitude of individual foods that are exceptionally valuable. These include almost all types of beans, peas, lentils, chickpeas, lupines, and many more. Peanuts and soybeans are factually pulses, and this group when considered in total and in its complete variety does not account for the most common alimentary trigger of anaphylaxis. The authors' conclusion will in relative terms lead to a distorted perspective of the entire food group of pulses. These represent an important and balanced part of human nutrition because they are rich in dietary fiber and micronutrients, have a low glycemic index, and along with cereal products are an important source of plant protein.

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In Reply:

We welcome Seifert's comments. In his letter to the editor, he explains in detail from a pharmacological perspective the most important pharmacological effects of adrenaline and the rationale of an early adrenalin administration in anaphylaxis. Mentioning autoinjectors is important because these can be used quickly and easily, not only by patients and their relatives, but also by medical support staff.

The letter by Ting focuses on the importance of legumes pulses. From an allergological perspective, these are potent allergens due to their physicochemical and immunological characteristics. Severe allergic reactions have been described for several species in this group. Severe reactions to lupine flour have been reported and this allergen has been included in the list of food allergens whose declaration is compulsory. For peas and beans too—lately because of to the increased use of pea flour in bread manufacturing—numerous reports of the occurrence of severe allergic reactions exist. Suffice it to say that legumes are valuable from a nutritional perspective, but from an allergological perspective they constitute a risk, especially for individuals with a predisposition for allergic diseases.

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