LETTER TO THE EDITOR

Snail anaphylaxis is not only asthma

Carolina da Silva Alves[1,2], Raquel Baptista Pestana[1], Catarina Barata[1], Sofia Couto[1], Mário Morais-Almeida[1]

[1]Allergy Centre, CUF Descobertas Hospital, Lisbon, Portugal

[2] Department of Pulmonology, Professor Doutor Fernando Fonseca Hospital, Amadora, Portugal

Corresponding author

Carolina da Silva Alves

Allergy Centre

CUF Descobertas Hospital

Rua Mário Botas;

Department of Pulmonology

Professor Doutor Fernando Fonseca Hospital

Lisbon, Portugal

ORCID: 0000-0002-8761-2805

E-mail: cmdsalves@gmail.com

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To the Editor,

anaphylaxis has grown into its own area of study, with relevant advances, including more inclusive, still diverse, diagnostic criteria that must be known by all clinicians (1). It is a serious systemic hypersensitivity reaction that may cause death (2). Severe anaphylaxis is characterized by potentially life-threatening respiratory or circulatory compromise, which may occur without typical skin symptoms or circulatory shock. Several definitions of anaphylaxis suggest it involves multiple organs, but severe cases can present with symptoms in a single organ system, particularly the respiratory. This discrepancy led the World Allergy Organization (WAO) to revise diagnostic criteria to include anaphylaxis with only respiratory symptoms (bronchospasm and/or laryngeal edema) upon exposed to a known or very likely allergen for that patient (2). A

prospective study found that a third of anaphylaxis cases presenting to an emergency department exhibited solely respiratory symptoms (3). Additionally, the anaphylaxis registry of the Portuguese Society of Allergy and Clinical Immunology (SPAIC) reported that 0.4% (n=8) of 1783 patients had exclusively respiratory symptoms and/or glottis edema, with half of the cases being food-related (4).

Snails, a delicacy eaten in south European countries, are an uncommon cause of food allergy and often present with isolated respiratory symptoms in a setting of severe anaphylaxis, including exercise induced cases (5, 6, 7).

In our clinical practice, we frequently encounter asthmatic patients with food allergies who, after ingesting specific allergens, receive treatment in the emergency department exclusively with bronchodilators and systemic steroids. This, arising from the allergens' often unrecognized role, frequently leads to the underdiagnosis of anaphylaxis and, consequently, to inadequate treatment.

In order to increase awareness, we retrospectively reviewed clinical charts of all our asthmatic patients diagnosed with IgE-mediated snail allergy (12 patients, 42% female, median age 23 years-old; range 14-44 years). Among the patients, 9 had a specific IgE determination to snail (*Helix Aspersa*), in 7 it was elevated, with a median value of 2.73 kUA/L and an interquartile range of 0.98 to 4.32 kUA/L (ImmunoCAP Thermofisher, Uppsala, Sweden). In the remaining 2 cases, specific IgE was negative, although the prick-prick test (SPPT) with fresh snail (*Helix aspersa*) was positive. All other patients reviewed also had a positive SPPT to fresh snail. Many patients also showed allergic sensitizations beyond snail: 8 were sensitized to house dust mites and 6 to pollens. Additionally, 5 had specific IgE to other mollusks or crustaceans, although only 2 had confirmed allergy to limpets (also presenting with isolated respiratory symptoms). Nine patients underwent SPT with tropomyosin extract, which was negative in all cases. In all these previously clinical e functional controlled asthmatics (steps 2 to 3 of Global Initiative for Asthma or GINA), the predominant clinical presentation of food allergy was severe asthma exacerbation with more than one episode in 9 patients. The majority of patients developed symptoms between 15 minutes and 2 hours after ingestion, while two experienced earlier onset (within 5–15 minutes) and another two had delayed onset (at 4 and 6 hours). All required at least one emergency room visit. Four patients also presented with mild urticaria or angioedema, and none had gastrointestinal symptoms. A suffocation feeling was commonly reported, without significant immediate effect of inhaled bronchodilators; all the patients received systemic steroids. Only 2 patients received treatment with epinephrine in the emergency room; 5 patients were admitted, 2 in intensive care units; none received mechanical ventilation.

This data shows that snail allergy can occur in patients with a clinical history of controlled asthma and, in these patients, it often presents with isolated severe respiratory symptoms. The clinical manifestations of snail anaphylaxis can mimic an asthma exacerbation that, if not identified in time, can progress to a severe outcome, representing a life-threatening situation, for which treatment must include the administration of adrenaline, namely by the intramuscular route.

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Authors' Contributions

All authors participated in the study design and conception. MMA drafted the initial version of the manuscript. All authors provided critical review of the manuscript and approved the final manuscript for publication.

Conflict of Interests

None to declare.

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