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Short Communication

Sublingual Allergen Immunotherapy is Safe and Effective when Precisely Prescribed: The Three Decades of the Brazilian Experience

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INTRODUCTION

I read with great interest the commentaries about the 2020 updates of the expert recommendations for the Global Initiative strategy for Asthma management and prevention (GINA), and among these letters, particularly the position of Harold S. Nelson, about the official "not recommendation" for the use of sublingual allergen immunotherapy (SLIT) in the treatment of patients with asthma and, at the same time, the recommendation for the use of subcutaneous allergen immunotherapy (SCIT) [1-6]. Since the position of the 2020 guidelines is directly contrary to the WHO's statements about SLIT as well the 2019 GINA guidelines, I felt compelled to write my humble opinion, based on my thirty years' experience of medical practice treating patients with allergic diseases with specific, group-specific and multi allergen sublingual immunotherapy [7,8]. The use of sublingual multi allergen immunotherapy was overspread in Brazil, since the seventies, when this treatment modality was provided over-the-counter at drugstores, as a comprehensive fixed mixture of aeroallergens, bacterial allergens and food allergens with or without adjuvants [9]. Brazilian pediatricians, pulmonologists, dermatologists, otorhinolaryngologists, allergists, and even general practitioners, treated with variable success millions of allergic Brazilian patients with patented fixed formulations of sublingual multiallergen immunotherapy. Recently these pharmaceutical fixed presentations were discontinued as an over-the-counter treatment provided by Brazilian drugstores and, currently, SLIT is prescribed in Brazil only by certified allergists. One of the reasons for this is that the patient with an allergic disease deserves a diagnostic workout. The treatment of allergic diseases is based on two pillars: avoidance and desensitization. The need for the use of symptomatic medications such as antihistamines, steroids, and bronchodilators is just an indicator that the real treatment is not working effectively. One of the biggest misconceptions of the "non-personalized" (or traditional) Medicine", strongly stimulated by the pharmaceutical industry, is that the use of symptomatic drugs would be one of the main pillars of the "treatment" of medical conditions, such as asthma. Well, in most cases, it is not! The big question, in reality, is: is asthma a disease, a syndrome, or a symptom? The fact is that asthma is not a unique disease. Clinically, asthma is almost a "symptom". Not a symptom in the propaedeutic sense, but a symptom in the meaning that the body is sending a dramatic message, communicating that "something is wrong". Several diseases may manifest asthma as a "final common indicator"; an allergy is just the main one. And when we say "allergy" we are also talking about a group of diversified diseases that may be produced by at least four different, but not excluding, hypersensitivity mechanisms against aerial, food, chemical, parasitic, and/or microbial antigens [10-12]. So, there is no real sense in recommendations like "to treat or not to treat" asthma with (subcutaneous or sublingual) allergen immunotherapy", provided that the disease being treated with allergen immunotherapy is not asthma, but allergy (or hypersensitivity). And to treat allergy requires a very different approach than to "treat" asthma. The first and main step to treat allergy is to identify the allergens to which the patient is sensitive. Ambiental allergens and food allergens are the main triggers of allergic reactions, including those that produce asthma. If these allergens are not properly avoided, the symptoms will persist, the patient's quality of life will not change, and, consequentially, the use of symptomatic medications is extended indefinitely. There is a great difference between the treatment of the monosensitized patient and the treatment of the polysensitized patient. As part of a Precision Medicine strategy, Allergen Immunotherapy must be adapted to the patient's sensitivities [13]. The use of standard multiallergen immunotherapy is a good bet, but not a guarantee that the extract solution effectively contains the specific allergens to which the patient is sensitive. That's why it was created the concept of Group-Specific Multi-Allergen Sublingual-Swallow Immunotherapy for polysensitized patients [14]. After a proper diagnostic workout, the polysensitized patient is oriented to avoid the identified specific allergenic triggers and, inside a Precision Medicine strategy, a personalized group-specific multi allergen sublingual immunotherapy may be prescribed, not as a "treatment", but as one of the components of a personalized tolerance-induction strategy [15]. This tolerance-induction strategy may include the use of formulated natural allergens (allergen-specific immunotherapy), the use of formulated modified allergens (allergoids), the use of immune adjuvants, as well the oral administration of progressive doses of the crude, cooked, and/or extensively baked food allergens [16,17]. That is the great difference about the choice of SLIT or SCIT. While SCIT is preferred for the mono sensitized patient,

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SLIT is the best choice for the polysensitized patient. The sublingual administration allows the use of a great number of allergens, while the local inflammatory reactions limit the number of antigens for SCIT. We must also consider that allergen immunotherapy is also not the main pillar of the treatment of the allergic patient: the main pillar is avoidance. But pure and simple avoidance has an immunological risk: the loss of the residual tolerance, increasing the sensitivity to the allergens. That is what our Italian colleague created the concept of "the factory of anaphylaxis" [18].

CONCLUSION

Allergen Immunotherapy is not a pharmacological treatment that may be recommended (or discouraged) by experts panels to treat "symptoms" such as asthma, but a personalized approach used by Precision Medicine as part of a tolerance-inducing strategy that supports the establishment of the allergen avoidance, minimizing the risk of anaphylaxis, and, in a long way, helping to desensitize the allergic diseases (hypersensitivities) that produce not only asthma but a myriad of others allergic "symptoms" such as rhinitis, dermatitis, urticaria and so on, that are considered common "comorbidities" of the asthmatic patient.

CONFLICT OF INTEREST

The authors have declared that they have no conflict of interest.

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