

Treating venom allergy during COVID-19 pandemic

To the Editor,

The COVID-19 pandemic led to rapid changes to our clinical and educational activities, showing that most of care of allergic diseases could be delayed with no significant serious effects or managed with telemedicine. However, allergen-specific immunotherapy (AIT) deserves special attention as it is the only therapeutic tool capable of modifying the natural history of the allergic disease. For this reason, we really appreciated the interesting paper of Klimek et al,¹ which represents the EAACI recommendations aiming at supporting all physicians performing AIT in their current daily practice. Here, we would like to focus on venom-specific immunotherapy (VIT) which represents a life-saving therapy,^{2,3} and to provide our experience (Figure 1) to colleagues on how to adapt their clinical practice to these unique circumstances.

In our country, the pandemic broke out with the end of a warm winter and the beginning of spring, hypothetically increasing the risk of resting, and thus the need for emergency room in the event of

serious reactions. Therefore, providing patients with autoinjectable adrenaline (AAI) and, if needed, treating them with VIT are of paramount importance.

It is critical for patients with anaphylaxis to have at least one AAI, and two AAIs in specific situations, like in case of clonal mast cell disorders (CMD), distance from an Emergency Department, overweight.

Interrupting VIT is not advised in the majority of cases, even though decision-making may vary based on local context, resources, and experience. Patients on a maintenance subcutaneous VIT of at least 5 years may stop treatment^{3,4} if they were resting without reaction and no risk factors for relapse are present.

In the remaining cases (severe pre-VIT systemic reaction, allergy to bee venom, systemic reaction caused by VIT, failure to achieve protection during VIT, CMD, and elevated baseline tryptase levels), as well as in pregnancy with anaphylactic reactions, VIT should be regularly continued. With regard to CMD, indolent systemic

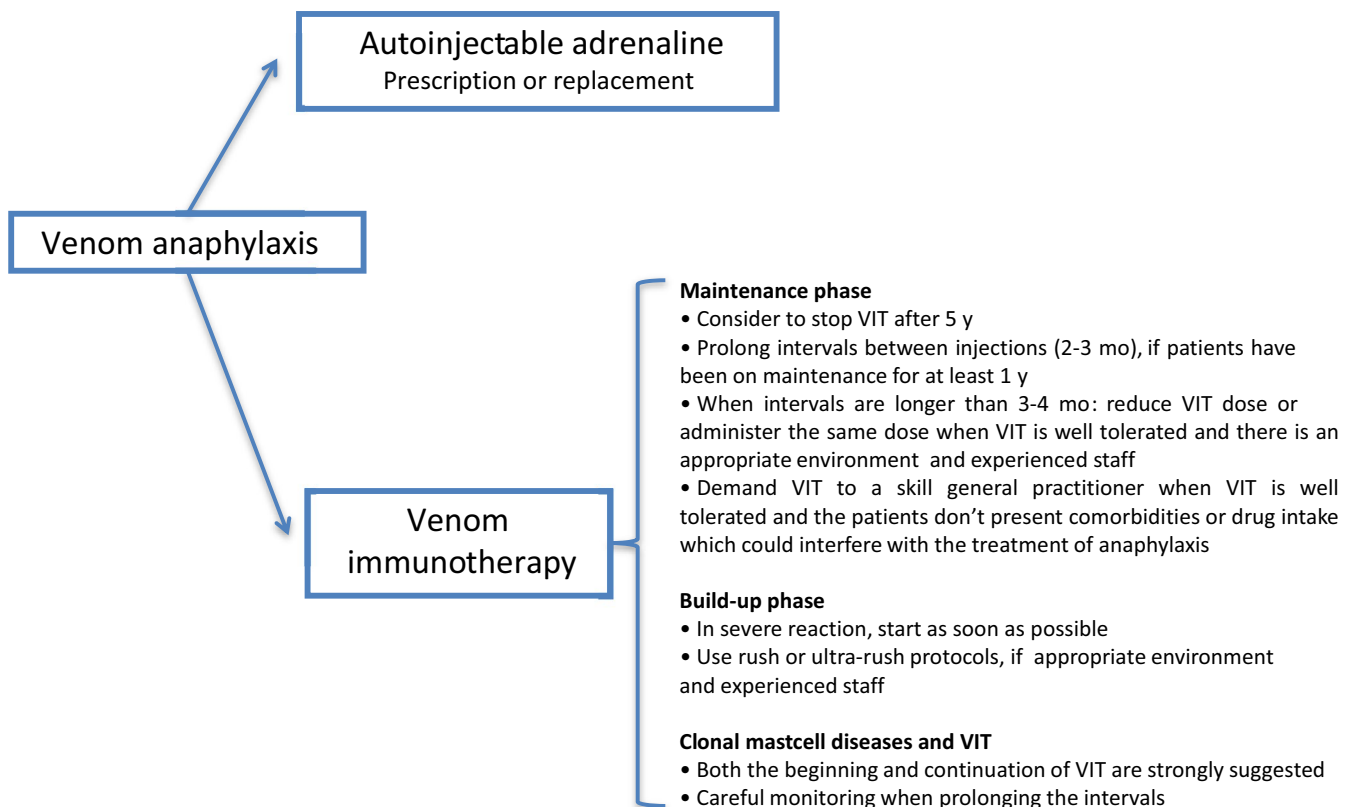


FIGURE 1 Role of the Allergist/Immunologist in the prevention of venom anaphylaxis during COVID-19 pandemic

mastocytosis (ISM) is the most frequently CMD associated with venom anaphylaxis. As ISM does not increase the risk of developing COVID-19, while may induce more severe and even fatal reactions after VIT discontinuation, its continuation is strongly suggested.

Intervals between injections should be prolonged to 2-3 months, without losing efficacy, taking into account different treatment duration and patient phenotypes. However, patients with CMD and other risk factors for side effects during VIT should be carefully monitored when prolonging time interval between shots.

In subjects who tolerated the treatment and do not have comorbidities or do not use medication that would make an anaphylactic reaction more difficult to treat, VIT could be performed by a skilled general practitioner.

In the case of beekeepers, once maintenance injections and field stings have been well tolerated for 3 years, regular re-exposure with one to two weekly stings at the hive may replace treatment injections during the flying season, but treatment injections should be carried on during winter.


In patients who tolerated previous shots, but missed administration and come back to the clinic after a long period (3-4 months), VIT can be continued with dose reduction or even with the same dose if performed in an appropriate environment by experienced staff.

Regardless of the presence or absence of CMD, VIT should be started as soon as possible in patients with a systemic reaction to venom, as this is a life-threatening condition and VIT is a life-saving therapy. In view of the imminent summer season, it would be appropriate to use rapid and ultra-rush methods, provided that clinicians have the experience and availability in handling these protocols.

In conclusion, even though COVID-19 pandemic is changing the way of assisting the patient, AIT and especially VIT represent justified exceptions in noninfected individuals.

CONFLICTS OF INTEREST

The authors have nothing to disclose.

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REFERENCES

1. Klimek L, Jutel M, Akdis C, et al. ARIA-MASK study group. Handling of allergen immunotherapy in the COVID-19 pandemic: an ARIA-EAACI statement. *Allergy*. 2020;75:1546-1554. <https://doi.org/10.1111/all.14336>
2. Bilò MB, Pravettoni V, Bignardi D, et al. Hymenoptera venom allergy: management of children and adults in clinical practice. *J Investig Allergol Clin Immunol*. 2019;29:180-205.
3. Sturm GJ, Varga EM, Roberts G, et al. EAACI guidelines on allergen immunotherapy: Hymenoptera venom allergy. *Allergy*. 2018;73:744-764.
4. Golden DB, Demain J, Freeman T, et al. Stinging insect hypersensitivity: A practice parameter update 2016. *Ann Allergy Asthma Immunol*. 2017;118:28-54.