

Is classical immunotherapy dead?

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Current Opinion in Allergy and Clinical Immunology 2010, 10:167

Immunotherapy has been called ‘The Allergist’s Holy Grail’. It was the first available treatment option, and it is still the only causal therapy available to us. It has been around for 100 years now, almost as long as the term ‘allergy’ exists. An abundance of knowledge has been accumulated over the years, and although we have begun to understand the underlying pathophysiological mechanisms involved, the basic treatment principle has remained the same: induction of tolerance by confronting the organism with gradually increasing doses of the pathogen.

This classical approach with preseasonal up-titration lasting for months followed by 3 years of perennial maintenance injections obviously demands too much from our patients. The total adherence rate with this treatment is less than 50% over 3 years, as demonstrated by the analysis of a prescription database [1]. In this age, in which we physicians have to continuously justify how we spend the limited resources of the healthcare system, such a figure is out of the question.

While reviewing published data on grass pollen specific immunotherapy, it therefore came as a great surprise that evidence for the classical method of desensitization is no longer superior [2]. On the contrary, the evidence for the newest form of immunotherapy using sublingual tablets is actually stronger in terms of quality and power of recommendation. There are now three brands of sublingual tablets available worldwide with more than 10 years of published double-blind, placebo-controlled clinical trials, and about a dozen brands of sublingual allergen solutions are vying for the favor of allergists. They, however, are far from giving up subcutaneous immunotherapy, as some recent scientific activities demonstrate.

‘Cluster’ is the magic word which promises better adherence and maintained efficacy.

Oliver Pfaar summarizes in his paper the endeavors that have been made in many countries to establish this new form of subcutaneous immunotherapy in current practice. Is it ready for general acceptance? In terms of safety, we have overcome concerns that rapid titration could cause numerous and more severe side effects than the classical, gradual up-titration. Still missing are long-term data on efficacy, persistent effects after termination of treatment, and the prevention of comorbidities.

However, although this information is presently being generated within the scientific community, practicing allergists have already been confronted with new concepts:

- (1) Intraseasonal start of conventional subcutaneous immunotherapy
- (2) Rapid up-titration of subcutaneous immunotherapy with natural allergens and adjuvants
- (3) Ultra-rapid up-titration of subcutaneous immunotherapy with chemically modified allergens
- (4) Short-term preseasonal subcutaneous immunotherapy with natural allergens and adjuvants

For the allergist, it is difficult to differentiate between innovation and transient fashion. However, ‘old immunotherapy’ will definitely be substituted soon by new, less time-consuming protocols, as demanded by our patients.

References

- 1 Mösges R, DeGeest S. Compliance with specific grass pollen immunotherapy is similar to that seen in other long-term treatment regimens. [in press]
- 2 Calderon M, Mösges R, Hellmich M, Demoly P. Towards evidence-based medicine in specific grass pollen immunotherapy. *Allergy*. 2009 Dec 21. [Epub ahead of print]