Editorial
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Practice Patterns of Allergen Immunotherapy in Korea: Where Are We?

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Allergen immunotherapy has been used for more than a century to treat allergic diseases, including allergic rhinitis and asthma, as well as venom-induced anaphylaxis. The efficacy of immunotherapy has been established by many double-blind, placebo-controlled studies that have been reviewed in meta-analyses.[1-3] Indications and prescription rules for immunotherapy have been clearly defined in the literature. However, prescription patterns of immunotherapy may differ by country.[4,5] The article in the issue studied the practice patterns of immunotherapy in Korea for the first time.[6] The authors e-mailed a questionnaire to 690 Korean allergists with clinical practice experience. About 70% of the respondents answered that they prescribed immunotherapy. Subcutaneous immunotherapy (SCIT) was performed by 82% and sublingual immunotherapy (SLIT) by the rest. Thirty percent of respondents replied that they did not perform immunotherapy; however, two thirds of them desired using it in future practice.

The results of this study are worthy of comment despite the limitations due to response rate and demographics. In this survey, 30.4% of the respondents performing SCIT answered that they had experienced anaphylaxis related to immunotherapy. Adverse reactions of immunotherapy can be classified into 2 categories: local reactions and systemic reactions that can range in severity from mild to very severe life-threatening anaphylaxis. Unfortunately, the authors did not use a severity grading system for systemic reactions[7] but asked simply "Have you ever experienced anaphylaxis?". Variability in how the term 'anaphylaxis' is interpreted may make it difficult to compare the risk of systemic reactions with those of other studies. In addition, attention must be paid to the interpretation of the percentage of respondents who experienced anaphylaxis. Notably, about 28% of the respondents prescribing immunotherapy used rush or cluster immunotherapy during the build-up phase. These accelerated schedules offer the advantage of achieving a therapeutic dose earlier; however, they are associated with a greater risk from systemic reactions compared to conventional protocols.[8]

Multiple sensitizations are frequent in atopic subjects. Multiple sensitizations are traditionally interpreted as cross-reactivity between biologically related allergens; however, they can also be viewed as an expression of the underlying atopic potential of the subject.[9] In Europe, patients are generally treated with one (or a few) relevant allergen extracts even if they have multiple sensitivities; however, in Korea and the United States, the majority of allergists tend to favor immunotherapy using multiple allergen extracts in polysensitized patients. The prevailing view of US allergists is that, as long as multi-allergen therapy is effective, there is an advantage in treating as many of the patient's actual or potential allergies as possible.[10] However, multi-allergen immunotherapy in polysensitized patients needs more supporting data to validate it as a treatment option.

SLIT is widely prescribed in Europe; however, only 5.9% of US allergists reported using SLIT.[11] The most cited reason for not using SLIT was the lack of approval by the Food and Drug Administration (FDA). If SLIT were an FDA-approved form of immunotherapy, 65.7% would use it to treat allergic rhinitis and 40.9% would use it to treat moderate to severe asthma. In Korea, about 20% of the respondents that prescribed immunotherapy used SLIT.[6] SLIT has advantages in home administration due to safety profiles despite its relatively late onset of action. On the contrary, whereas SCIT has an early onset of action, repeated injections and safety concerns have limited its use in the pediatric age group. Keles et al.[12] studied the efficacy and safety of

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immunotherapy using a combination of SCIT in the build-up phase and SLIT maintenance compared to SCIT or SLIT only. This approach successfully combined the advantages of 2 alternatives: rapid onset and potency in SCIT and safety and avoidance of injections in SLIT.

Anti-IgE has been challenged to improve the safety and efficacy of immunotherapy. Omalizumab pretreatment quantitatively improves the safety of rush immunotherapy in patients with allergic rhinitis.[13] This approach could be an effective strategy to permit more rapid and higher doses of allergen immunotherapy with better safety. Immunotherapy and treatment with omalizumab have complementary modes of action. Kuehr et al. conducted a controlled trial to assess the efficacy and safety of omalizumab in children and adolescents with seasonal allergic rhinitis.[14] Each subject was started on build-up SCIT before the anticipated pollen season, and followed with omalizumab or placebo in parallel to SCIT maintenance during the pollen season. The patients who received omalizumab during the pollen season had about a 50% reduction in symptom load compared to patients who had SCIT alone. Their study shows that combined therapy could provide better efficacy than either treatment alone. At present, asthma that is not well controlled might be considered a contraindication to immunotherapy. In retrospective surveys conducted by the American Academy of Allergy, Asthma and Immunology, a total of 34 fatal reactions to immunotherapy were reported from 1985 to 2001.[15] Most fatalities occurred in patients with asthma that was poorly controlled or treated with oral corticosteroids; therefore, it remains of interest if omalizumab can permit the administration of immunotherapy to high-risk patients (eg, patients with uncontrolled asthma).

In conclusion, the majority of Korean allergists have prescribed SCIT for a long time. SLIT is not yet popular in Korea due to its recent introduction. However, SLIT is a promising immunotherapy that may change its inclusion criteria and increase in the population receiving immunotherapy. In this context, SLIT will be more frequently used in the future.

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