

Subcutaneous and Sublingual Immunotherapy in Allergic Rhinitis

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Introduction

Allergic rhinitis (AR) is a common disease and causes enormous costs in the health care system. Its prevalence in Korea is about 20% based on physician diagnoses and, in Europe the prevalence ranges from 17% to 29%.¹⁾ There is strong evidence that the upper and lower airways function as one unit, so there may be merit in treating AR and asthma simultaneously as two parts of the same disease.

Subcutaneous immunotherapy (SCIT) and sublingual immunotherapy (SLIT) are both effective treatments for allergic rhinitis and allergic asthma,²⁾ both show clinical evidence of disease modification by decreasing new sensitizations in individuals who were monosensitized, by reducing the development of asthma in patients with allergic rhinitis, and by inducing clinical improvement that persists for years after discontinuation of a successful course of treatment.

Comparison of SCIT and SLIT

SCIT has been the gold standard, whereas SLIT has emerged as an effective and safe alternative. For patients with AR whose symptoms remain uncontrolled despite of medical treatment, allergen immunotherapy should be considered. When each is compared with placebo, results of meta-analyses suggest greater efficacy of SCIT. In the limited number of randomized, head-to-head studies, SCIT has more often provided greater clinical and immunologic responses.^{3,4)}

SCIT has been shown to be highly effective, particularly for seasonal pollinosis but also for perennial disease in patients with dust mite allergy. Nevertheless, this subcutaneous route of administration can occasionally be associated with allergic side effects and therefore needs to be administered in a specialist

setting with access to epinephrine and other resuscitative measures.^{4,5,6)}

SLIT has emerged as an effective and safe alternative to the subcutaneous route for patients with seasonal allergic rhinitis (SAR),^{7,8)} whereas, evidence for efficacy in perennial dust mite allergy has been less convincing, particularly in children.^{5,9)} Sublingual treatment is commonly associated with local itching and swelling in the mouth, which can occasionally be bothersome. SLIT has an impressive safety profile in clinical trials and postmarketing surveillance.^{9,10)}

Preliminary analysis of data

Preliminary analysis of data we have been collecting for the past 6 years suggest SCIT reduces allergic skin reactions and nasal and induced sputum eosinophils. However, continual analysis of a larger sample population is needed to determine if these differences are statistically significant. We also aim to assess SLIT's safety and efficacy in reducing nasal and sputum eosinophilia, symptoms and rescue medication use, and impaired lung function in Korean pediatric patients with allergic rhinitis and/or allergic asthma.

Conclusion

SCIT and SLIT are both effective treatments for allergic rhinitis and allergic asthma. Choice might be determined by the local availability of SCIT and SLIT products and personal preference.

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