

Sublingual immunotherapy: adherence based on timing and monitoring control visits

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Allergen Specific Immunotherapy is the only causal treatment that is recognized as effective and as offering long-lasting results (1).

In childhood, immunotherapy has been shown to prevent the appearance of new sensitizations in patients mono-sensitized to house dust mites (2).

Subcutaneous immunotherapy (SCIT) has been long considered the only way of giving this treatment, but more recently, the sublingual immunotherapy (SLIT) represents other viable treatment options (3).

However, immunotherapy in any form requires commitment by the patient, which makes adherence (or compliance) issues particularly relevant.

Currently, the studies on adherence for SLIT show quite high compliance rate(s) from 60% to 90% of patients even if long-term surveillance was carried out (4–6).

On the other hand, in real life, a commonsense approach and unpublished data on sales of allergy companies suggest that the SLIT adherence is quite low.

This study aimed to investigate prospectively the adherence to treatment for three different methods of timing and

monitoring SLIT by collection data on the drop-out rate among 300 children aged 6–16 years who had allergic rhinitis, allergic asthma or both for at least 1 year and were prescribed immunotherapy for only one allergen or homogeneous group of allergens (i.e. Grasses or Mites).

All the randomly selected patients were divided into three groups according the timing of clinical visits used. They were in charge by three research doctors during the 2-year follow-up of the survey.

Group A consisted of 100 patients who underwent a timing control visit of four times per year; group B consisted of 100 patients who underwent a timing control visit of two time per year; group C consisted of 100 patients who underwent only one clinical visit per year.

The entire programme of allergen immunotherapy in its different timing forms was conducted from 2004 to 2008 under controlled conditions in our hospital setting. All children were from Sicily; they received a total reimbursement by the local government health service to buy the vaccines.

The extracts used for SLIT were from Stallergenes (Antony – France: Staloral), from Lofarma (Milan – Italy: Lais) from Alk- Abellø (Horsholm – Denmark:

SLITOne) and Allergopharma (Hamburg – Germany: Sublingual Allergopharma).

Immunotherapy was performed according the schedules suggested by the manufacturers.

A control visit was scheduled at 3-months interval for the group A, at 6-months interval for the group B, and one time per year for the Group C.

At each visit, the doctor attending each patient collected the specifically designed charts filled in during the preceding months and registered the time of every interruption. The children who stopped immunotherapy before the planned period of 2 years were considered noncompliant.

The percentage of noncompliant individuals was significantly higher in group C (70.4%) compared with group B (32.3% $\chi^2 = 19.82$, $P < 0.005$) and group A (18.5% $\chi^2 = 23.94$, $P < 0.0005$).

The percentage of non complaints individuals in group A was also significantly lower in comparison with that in group B ($\chi^2 = 21.1$, $P < 0.05$).

Timing of treatment withdrawal in three groups during the overall 2-year period is illustrated in Fig. 1.

The patients had been treated in real life with the prescriptions of drops or tablets

Due to the fact that sublingual immunotherapy (SLIT) is a long lasting treatment, the adherence for SLIT is a pivotal issue in order to achieve an adequate improvement of patients with IgE mediated disorders.

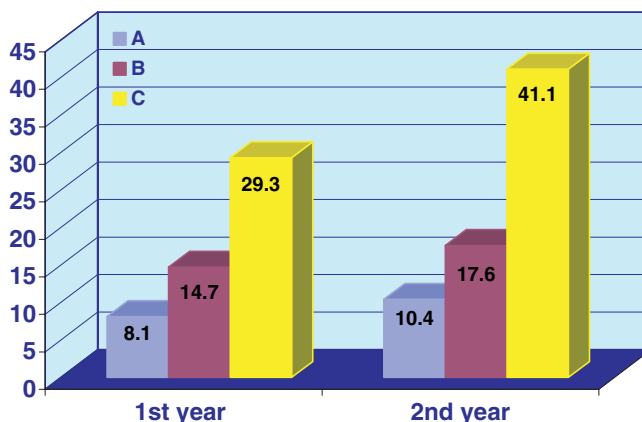


Figure 1. Percentage of patients who withdrew from treatment (SLIT) during the first, and the second year among those who had four clinical visits per year (Group A), two clinical visits per year (Group B) and one clinical visit per year (Group C).

and are required to take with them vials or tablets and showing them to doctors in charge for the study at each control.

Adequate adherence with SLIT was reached only in patients called for visits four times per year (group A); the children of other two groups showed a lower adherence: 32.3% (group B) and 70.4% (group C) abandoned allergen-specific immunotherapy.

The pivotal measure to enhance adherence is the frequent control of allergic patients.

SLIT is self administered at home and adherence is a dynamic process; therefore, SLIT should be monitored frequently from the beginning to the end of treatment to check the effective co-operation of patients. Adherence is influenced by a large interactive complex of factors: the doctor-patient relationship is pivotal to optimize the management of individuals treated with SLIT to improve the effectiveness of this form of immunotherapy.

In summary, patients must be instructed to follow carefully the schedule(s) of administration and to undertake a clinical visit at least every 3 months. In our opinion, the procedure

and results from this study could be used in daily clinical practice.

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References

1. Nelson HS. Allergen immunotherapy: where is it now? *J Allergy Clin Immunol* 2007;**119**:769–779.
2. Des Roches A, Paradis L, Menardo JL, Bouges S, Daurès JP, Bousquet J. Immunotherapy with a standardized *Dermatophagoides pteronyssinus* extract. VI. Specific immunotherapy prevents the onset of new sensitizations in children. *J Allergy Clin Immunol* 1997;**99**: 450–453.
3. Canonica GW, Baena-Cagnani CE, Bousquet J, Bousquet PJ, Lockey RF, Malling HJ et al. Recommendations for standardization of clinical trials with allergen specific immunotherapy for respiratory allergy. A statement of a World Allergy Organization (WAO) taskforce. *Allergy* 2007;**62**:317–324.
4. Pajno GB, Vita D, Caminiti L, Arrigo T, Lombardo F, Incorvaia C et al. Children's compliance with allergen immunotherapy according to administration routes. *J Allergy Clin Immunol* 2005;**116**: 1380–1381.
5. Passalacqua G, Musarra A, Pecora S, Amoroso S, Antonicelli L, Cadario G et al. Quantitative assessment of the compliance with once-daily sublingual immunotherapy in children (EASY project: evaluation of a novel SLIT formulation during a year). *Pediatr Allergy Immunol* 2007;**18**:58–62.
6. Röder E, Berger MY, de Groot H, Gerth van Wijk R. Sublingual immunotherapy in youngsters: adherence in a randomized clinical trial. *Clin Exp Allergy* 2008;**38**:1659–1667.