



**Allergologia et
immunopathologia**
Sociedad Española de Inmunología Clínica,
Alergología y Asma Pediátrica
www.elsevier.es/ai



ORIGINAL ARTICLE

Plasticity of immune system vs. memory therapy IST

A. Tammaro^{a,*}, I. Romano^a, F. Persechino^b, F.R. Parisella^c, I. Trimarchi^d, S. Persechino^a

^a Dermatology Unit*, NESMOS Department, S. Andrea Hospital, University of Rome "Sapienza", Rome, Italy

^b Department of Dermatology, University of Modena and Reggio Emilia, Modena, Italy

^c Premedical School of Medicine, Towson University, Baltimore, USA

^d Director Medical Meeting, Italy

Received 10 November 2016; accepted 24 January 2017

KEYWORDS

Antibodies;
Antihistamines;
Biological plasticity;
Immunotherapy;
Lymphocytes;
Vaccination

Abstract

Background: Pharmacotherapy and immunotherapy are the main treatments for allergic diseases to inhalants.

Objective: This study investigates whether to repeat short cycles of immunotherapy after 3 or 5 years the from interruption of the first therapeutic cycle, lasting 3–4 years, to maintain immune memory in individuals subjected to IST.

Methods and Results: We have compared two groups, one of 452 patients who, after the first treatment for 3–4 years of IST, performed a cycle of four months after three and 10 years from the suspension, and a second group of 126 individuals who have performed only the IST treatment for 3–4 years. The best results were obtained in the first group.

Conclusions: These results are due to the immune system's plasticity, a very important concept in clinical practice.

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Introduction

Allergic diseases to inhalants are treated with pharmacotherapy and immunotherapy.^{1,2} Contrary to pharmacotherapy, the immunotherapy with allergens is the only way to obtain long-term benefits which can persist until 3–5 years after discontinuation of therapy.³ The IST (immunotherapy specific therapy) expected a therapeutic

cycle lasting 3–4 years; it is possible to repeat a short cycle to maintain immune memory after 3 or 5 years.

Materials and methods

Between 1998 and 2000 we selected a group of 452 patients, 6 and 45 years old, divided according to Table 1.

A second group of 126 patients, 6 and 45 years old, enrolled between 1998 and 2000, were compared with the first and divided according to Table 2.

For each patient, after signing the informed consent, we performed PRIST, RAST and prick test for inhalant, IgE

* Corresponding author.

E-mail address: tammaroantonella@gmail.com (A. Tammaro).

Table 1 A first group of 452 patients selected between 1998 and 2000.

Gender	06–12 years old	13–18 years old	19–30 years old	31–45 years old	Total
Female	46	75	56	48	225
Male	47	60	70	50	227
Total	093	135	126	098	452

Table 2 A second group of 126 patients enrolled between 1998 and 2000.

Gender	06–12 years old	13–18 years old	19–30 years old	31–45 years old	Total
Female	12	21	13	18	64
Male	10	18	14	20	62
Total	22	39	27	38	126

Table 3 Patients of the 1st group classified for their allergy results.

Gender	Perennial mono-allergies	Seasonal mono-allergies	Perennial and seasonal multi-allergies	Seasonal multi-allergies	Total
Female	26	16	67	116	225
Male	29	12	73	113	227
Total	55	28	140	229	452

Table 4 Patients of the 2nd group classified for their allergy results.

Gender	Perennial mono-allergies	Seasonal mono-allergies	Perennial and seasonal multi-allergies	Seasonal multi-allergies	Total
Female	15	10	9	31	62
Male	14	13	8	29	64
Total	29	23	17	57	126

Tot., CBC with formula, proteinaemia with Protidogramma, Tryptase^{4–6} and, in some cases, α -Tryptase and β -Tryptase (Tables 3 and 4).

These patients have been vaccinated for 3 or 4 years (timing determined according to the dosage in the blood of Tryptase and Prick test two years after the start of desensitisation therapy).

In agreement with what is written by Passalacqua and Bettoncelli we used both the desensitising subcutaneous therapy and SLIT.^{7–9} We have preferred the latter in most cases, as can be seen from Tables 5 and 6.

The patients of both groups were monitored for 14 years, every three months, by visiting ENT, Rhinomanometry, Spirometry and in 22 cases rhino-fibro-scopy. In the study we

recruited only those patients with an improvement in their condition equal to or greater than 70%; this was done using a control system with closed questions administered to the patients, the reduction of the drugs used in the period state at least 1/3, the reset of the normal timing of the nasal muco-ciliary transport, to return to acceptable spirometric values, leading to a decline in asthma attacks in those who suffer, and to return to normal level of Tryptase.^{10–12}

This strange number of patients is because they were the ones who remained constant in the quarterly visits, we discarded subjects who did not have adequate compliance.

After three years from the suspension of the immunising therapy, patients of the first group performed SLIT therapy

Table 5 Patients of the 1st group classified by type therapy ITS.

Type of vaccine	Perennial mono-allergies	Seasonal mono-allergies	Perennial and seasonal multi-allergies	Seasonal multi-allergies
Subcutaneously	11	12	16	34
Sublingual monomeric allergoid	42	9	59	109
Sublingual cleansed allergens	2	7	65	89
Total	55	28	140	232

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