

Original article

Physician and patient survey of allergic rhinitis in France: perceptions on prevalence, severity of symptoms, care management and specific immunotherapy

Background: Specific immunotherapy (SIT) is the only aetiological treatment used in allergic rhinitis (AR). A telephone survey of patients and physicians in France was carried out to understand better the real and perceived advantages and inconveniences of this therapeutic approach.

Methods: A cohort of 453 individuals with AR was selected using the Score For Allergic Rhinitis questionnaire. The survey evaluated the level of understanding of allergic rhinitis and its management, including both pharmacotherapy and SIT. A parallel survey was conducted with 400 general practitioners, allergists and nonallergist specialists.

Results: Approximately 50% of patients had heard about SIT as a therapeutic option. Of these, 56% had a positive view of SIT and 14% a negative image. A majority of patients and physicians with a positive opinion associated SIT with improved well-being and quality of life, while those with a negative opinion considered it to be a long and inconvenient treatment, with uncertain results. Over 50% of patients who had been offered SIT had accepted it and approximately 60% of these were satisfied with it. The future availability of SIT as sublingual tablets was perceived positively by both patients and physicians.

Conclusions: Many patients with AR are unaware of their pathology and few seek help from health professionals. When patients take medication, they are generally satisfied with their treatment, even if it is only symptomatic. Patients and physicians see the notion of definitive recovery as the main benefit of SIT, whereas the main disadvantage is the duration of treatment.

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According to the ECRHS (European Community Respiratory Health Survey) (1) and International Study of Asthma and Allergies in Childhood (2) studies, allergic rhinitis (AR) is a common pathology across Europe, with a prevalence that is constantly increasing. The estimated prevalence of clinically confirmed AR across France ranges from 21.0% to 28.0%, with an average prevalence of 24.5% (3), and 30–35% in the ECRHS survey (1). Young adults are most often affected, with consequent disturbances to their daily and socio-professional life. The impact of this pathology on quality of life was reported in the ERASM pharmaco-epidemiological survey (4). Another study using a quality of life questionnaire showed that the effects of AR on quality of life are comparable to those observed in patients with moderate to severe asthma (5).

Specific immunotherapy (SIT) is the only aetiological treatment for IgE-dependent allergy (6) and has been used

for several decades in patients with AR and asthma. The efficacy of subcutaneous specific immunotherapy (SCIT) in asthma and rhinitis in adults has been demonstrated in meta-analyses (7, 8), and the efficacy of sublingual specific immunotherapy has also been demonstrated in meta-analyses of asthma and rhinitis in adults and children (> 5 years of age). Studies have shown significant effects against the symptoms of rhinitis related to allergy to house dust mites and pollen (birch and olive trees, cupressaceous conifers, grasses and pellitory) (9–11).

With the increased prevalence of allergies and better recognition of their early signs, SIT is likely to play an increasing role in allergy management, a trend facilitated by the development of new galenic forms. To obtain a 'photograph' of the current perceptions that physicians and patients have of the management of AR and SIT, we conducted a telephone survey on a large sample of patients and physicians in France.

Methods

The initial pilot stage was a qualitative survey performed in patients and physicians in March 2006. In brief, face-to-face interviews were conducted with 10 patients, aged 18–45 years, and 17 physicians. At the end of this pilot survey, a questionnaire was written and validated by an expert committee.

A telephone survey was carried out in France by TNS Healthcare in June 2006 and included 1362 subjects aged 18–50 years. Patients were randomly selected according to quotas of the five following criteria: sex, age (three groups: 18–24, 25–34, 35–50 years), working status, geographical region and type of area (12). The statistical reference was carried using the Employment Survey 2002 (revised in 2006) of INSEE. Data collection was obtained using 'France Telecom' for phone numbers.

Individuals suffering from AR were detected using a screening algorithm based on the Score For Allergic Rhinitis (SFAR) (13). In total, 510 patients with AR were identified, of whom 453 had an allergy of <6 months duration (Fig. 1). Allergic rhinitis symptom severity and its impact on the daily life of these patients were assessed using a scale ranging from 1 to 10. Additional questions concerned the medical management and follow-up of their allergy, their perception of SIT, and their reaction if and when SIT treatment was proposed.

Physicians were also selected randomly. Three physician groups were interviewed: 100 primary care physicians (GPs), 100 nonallergist specialists (44 pneumologists and 56 ENT specialists without any particular skill in the treatment of allergies) and 200 allergists (92 allergists, 88 pneumologists and 20 ENT specialists with training and experience in treating allergies). Each of these samples was representative and selected to quota of their working area. The reference statistics were based on the TVF physician database.

The physicians assessed the same parameters as those in the patient survey. Physicians were also questioned about their diagnosis, their appreciation of the functional impact of AR, care management, treatment satisfaction, their perception of SIT, the importance of different galenic forms, and their own use of SIT in practice.

For the current survey, interviews were carried out between 8th and 15th June 2006 for patients and 8–28th June 2006 for physicians. The results are expressed as means $\pm$ SD, or as percentages.

Results

Allergic rhinitis was underestimated by the patients; only 44% of those detected by the SFAR questionnaire as

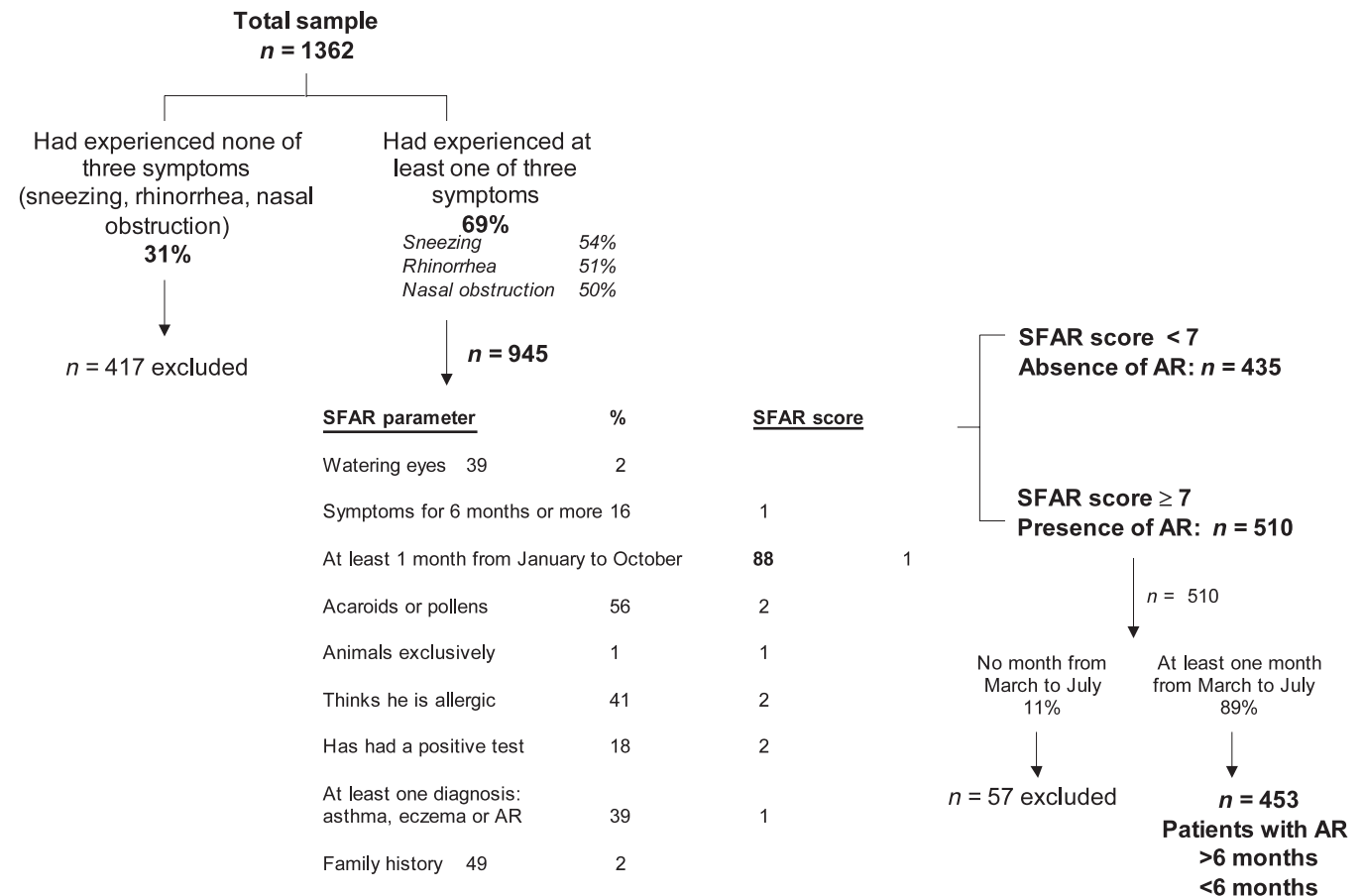


Figure 1. Screening algorithm for allergic rhinitis. The Score For Allergic Rhinitis is a quantitative score (13) for the identification of allergic rhinitis.

suffering from AR were aware that they were suffering from a medical condition. In 63% of cases, however, patients recognized pollen as being a triggering factor for their symptoms.

Symptoms and frequency of episodes

According to the patients, the five most typical symptoms of AR were sneezing (72%), rhinorrhea (66%), eye irritation (65%), nasal congestion (63%) and itching nose (55%). For the physicians, the three most typical symptoms were rhinorrhea (84%), sneezing (78%) and eye symptoms (70%). Nasal congestion (66%), although characteristic of this pathology and one of the classic triad, was only the fourth most typical symptom.

For the patients, the mean duration of awareness of this pathology was 9.8 ± 9.2 years (median = 6), with 34% of patients developing the condition within the last 5 years, 32% 5–10 years ago, and 27% more than 10 years ago. On average, patients had between six and 10 symptomatic episodes per year, with a mean duration of 40 days (with a large variation from 1 to 104 days; median of 21 days).

Severity and inconvenience

The impact of AR, as estimated by the patients and perceived by the doctors, is indicated in Table 1. For the patients, the three most troublesome symptoms were eye irritation (24%), sneezing (21%) and rhinorrhea (18%). For the doctors, they were perceived as rhinorrhea (84%), sneezing (78%) and eye irritation (70%). Almost all patients had concomitant symptoms, notably continuous fatigue, nocturnal wakening, mood disorders, irritability and difficulty in concentrating (Table 1). Only 23% of patients had developed strategies to prevent the triggering, prolongation or worsening of their allergy. The family circle of patients usually reacted positively (51%) or indifferently (44%) to the allergy, although in 3% of cases, they reacted negatively.

In many cases (69%), patients did not consider AR to be an illness, even though they needed to take medication. Many considered the condition to be an integral part of themselves, and some (18%) even found it hard to imagine their lives without AR. The chronic, unavoidable and irreversible character of AR was mentioned by 37% of cases as contributing to the overall disease burden. Most patients would like to be rid permanently of their AR.

The concomitant symptoms, particularly continuous fatigue, were more important for the 25–34 year age group compared with the 18–24 year age group (49% vs 35%; $P < 0.01$) and 35–50 year age group (39%; $P < 0.05$). Mood disorders were less important in the younger age group: 24% for 18–24 year olds vs 34% for 25–34 year olds ($P < 0.05$) and 34% for 35–50 year olds

Table 1. Symptoms of allergic rhinitis and the trouble (bother) they cause

	Perception by doctors	Estimation by patients	<i>P</i> for comparison between the three patient age groups†
Severity of handicap (doctors) or symptoms (patients)*	6.6 ± 1.6	4.8 ± 2.1	ns
Bother (general)	6.2 ± 1.6	4.7 ± 2.5	ns
Bother in professional life	6.3 ± 1.8	4.4 ± 2.8	ns
Bother in familial life	5.1 ± 1.9	3.4 ± 2.5	ns
Bother in social life	5.9 ± 1.8	3.9 ± 2.5	ns
Bother in leisure activities	6.1 ± 1.9	4.3 ± 2.7	ns
Concomitant symptoms (frequency)			
Continuous fatigue	59%	41%	$<0.01 \ddagger$ $<0.05 \S$
Nocturnal wakening	76%	38%	ns
Mood disorders	55%	32%	$<0.05 \P$ $<0.01 **$
Difficulty concentrating	64%	31%	ns

*Severity of handicap (or symptoms) and bother were estimated on a scale of 1–10 (10 = most severe). For severity/handicap (1 = episode not at all severe/no impact on daily life, 10 = episode very severe/impact on daily life), and for bother (1 = episode no bother, 10 = episode very troublesome).

†The three age groups were: 18–24, 25–34 and 35–50 years.

‡25–34 years vs 18–24 years.

§25–34 vs 35–50 years.

¶18–24 years vs 25–34 years.

**18–24 years vs 35–50 years.

ns, not significant.

($P < 0.01$) (Table 1). All the other symptoms of illness did not differ according to age.

Care management

When an episode of AR occurred, almost half (49%) the patients did nothing and waited until it was over, while 31% took a previously prescribed medication.

At the onset of an episode, 20% of patients consulted a health professional (doctor or pharmacist), and subsequently, two-thirds consulted either a doctor (59%), most frequently their GP, or a pharmacist (26%) or both. The specialist (allergist, ENT specialist or pneumologist) was consulted initially only in 12% of cases. GPs referred patients to a specialist in 42% of cases, and the family circle also played a role by persuading the patient to seek specialist treatment. Postconsultation follow-up was infrequent and was carried out for only 42% of patients, mainly by GPs.

Symptomatic treatment

The principal medications taken during the last episode of AR were antihistamines (53%) and local corticoids (21%). The level of satisfaction with these treatments

Table 2. Perception and satisfaction of symptomatic treatments for allergic rhinitis

Patients		Doctors	
Most frequently mentioned positive characteristics			
Simplicity	82	Efficacy	76
Lack of side-effects	82	Security	58
Efficacy	81	Rapidity of action	42
Most frequently mentioned negative characteristics			
Temporary	53		
Dependence on medication (need to always have the medication at hand)	49		
Inconvenience	41		
		Doctors	
Level of satisfaction	Patients	Doctor's perception of patients' satisfaction	Doctor's satisfaction
Very satisfied	34	9*	19
Fairly satisfied	49	79	78
Somewhat satisfied	12	11	2
Not at all satisfied	5	0	0
Don't know	<1	1	0.5

*Six per cent allergists vs 12% nonallergist specialist ($P = \text{ns}$) vs 13% GPs ($P < 0.05$).
All values are given as percentage.

Table 3. Overall level of satisfaction of patients with symptomatic treatments

	Anti-histamines ($n = 118$)	Local corticoids ($n = 48$)
Very satisfied	34	23
Fairly satisfied	53	57
Somewhat satisfied	8	12
Not at all satisfied	5	8

All values are given as percentage.

and their main positive and negative features are indicated in Tables 2 and 3. Of the patients who took medication during their last episode, 34% said they were 'very satisfied' whatever the type of drug. On the whole, doctors were also satisfied with symptomatic treatment ('very' or 'fairly satisfied' in 97% of cases) (Table 2), without any significant difference between medications (Table 3). No differences were observed regarding the perception and satisfaction with symptomatic treatments between experienced physicians (allergists) and nonexperienced physicians except for the rapidity of action of symptomatic treatment [48% allergists vs 37% nonallergist specialists ($P < 0.05$) vs 36% GPs ($P < 0.05$)] and the doctors' perception of satisfaction with symptomatic treatment, assessed as very satisfied by 6% of allergists vs 12% of nonallergist specialists ($P = \text{ns}$) vs 13% of GPs ($P < 0.05$) (Table 2).

Specific immunotherapy

Knowledge and perception. (i) *Patients:* only 52% of the patients with AR had heard about SIT. Of these, 56% had a positive and 14% a negative perception, the rest had a neutral image.

The positive image of SIT was associated with the idea of well-being (68%), seriousness (45%), recovery (45%) and efficacy (44%). Negative perceptions resulted frequently from the idea of long treatment duration (71%), doubtful outcome (60%), and constraints related to the treatment (59%).

Patients' ideas on treatment duration were often somewhat hazy. While 19% estimated the duration correctly (3–5 years), 67% thought that the treatment lasted < 2 years and 11% thought it could last more than 5 years.

For the patients, the most important source of information on SIT was their doctor, particularly, the allergist and GP. The family circle also played a big role, followed by the media.

During the survey, 71% of patients stated that they were ready to undergo SIT if their doctor offered it to them. Among the patients with a positive image of SIT, the acceptance rate was 83%.

The four principal motivating factors for accepting SIT were well-being (33%), recovery (27%), the fact of no longer being troubled (19%), and a definitive end to symptoms (18%).

The four main reasons for refusing SIT were the low severity of symptoms (41%), treatment duration (21%), doubtful outcome (19%) and constraints associated with treatment (14%).

(ii) *Physicians:* The image of SIT was positive for 65% of doctors, negative for 14%, while 20% had no firm opinion. Among allergists, 83% had a positive view.

The three positive characteristics mentioned most often were the aetiological nature of the treatment (63%), its efficacy (58%) and well-being (47%). The negative image was associated with doubtful outcome (78%), treatment constraints (51%) and long duration (46%).

Table 4. Advantages and disadvantages of specific immunotherapy compared to pharmacotherapy

Advantages and disadvantages	Total (%)	Allergists (%)	Nonallergist specialists (%)	GPs (%)
Reduction in symptomatic treatment	93	98	89 ($P < 0.01$)	89 ($P < 0.01$)
Method of becoming immune against pollens	90	91	82 ($P < 0.01$)	95 (ns)
Aetiological treatment	87	ns	ns	ns
Efficacy from the first pollen season	87	ns	ns	ns
Duration of treatment (3–5 years)	55	37	68 ($P < 0.01$)	77 ($P < 0.01$)

Specific immunotherapy was considered to lead to a reduction in symptomatic treatment by 98% of allergists vs 89% of nonallergist specialists ($P < 0.01$) and GPs ($P < 0.01$), and represented an immune treatment for 91% of allergists vs 82% of nonallergists ($P < 0.01$) and 95% of GPs (ns).

For 37% of allergists, the duration of SIT was a disadvantage vs 68% for nonallergist specialists ($P < 0.01$) and 77% for GPs ($P < 0.01$).

More details on the advantages and disadvantages of SIT given in the responses of patients and physicians are shown in Table 4. On the whole, the opinion of the patients and doctors was similar.

Galenic form. (i) *Patients:* when asked which formulations they had heard of, patients most often cited the subcutaneous route (75%) and the sublingual route (25%). Interestingly, two forms which are not yet available were also cited frequently, namely sublingual tablets (22%) and oral or nasal spray (15%). Sublingual tablets or route were estimated to improve convenience by 40% and 31% of patients respectively.

(ii) *Physicians:* According to the doctors, sublingual galenic forms would improve convenience for the patients (tablet 70%, sublingual route 68% – several responses were possible). Thirty-eight per cent of the doctors considered sublingual tablets to be 'innovative', 41% an 'improvement' and 16% 'of no importance'. The introduction of a sublingual tablet was considered to increase the likelihood of proposing SIT and more than half of the doctors claimed that the availability of this new galenic form would make the management of their allergic patients easier.

Experience of specific immunotherapy

Specific immunotherapy had been proposed to 21% of the patients questioned. Of these, 58% had accepted. Among those with a positive perception of SIT this figure was 80%, and 37% among those who had a negative image (Table 5).

Allergists were the main pioneers of SIT; they were also the specialists to whom doctors predominantly sent their patients. Their main reasons for proposing SIT are summarized in Table 5. The main reasons for patients accepting or refusing SIT are also shown in Table 5.

Table 5. Experience of specific immunotherapy (SIT)

	Patients	
Acceptance of SIT		
All the patients	58	
with a positive image	80	
with a negative image	37	
Patients proposed SIT by an allergist	85	
Main reasons for accepting SIT – multiple answers possible		
Too frequent episodes	21	
Very severe episodes	21	
Desire for a definitive treatment	15	
Symptomatic treatment becoming ineffective	13	
Main reasons for refusing SIT – multiple answers possible		
Too long duration	31	
Questionable efficacy	20	
Low severity of symptoms	18	
Too many constraints	18	
Main reasons for proposing SIT – multiple answers possible	Allergists	
Presence of a mono sensitization	55	
Associated asthma	54	
Insufficient response to symptomatic treatments	43	
Too frequent use of corticoids	40	
Galenic form of the treatment	Patients	
Injectable	78	30
Sublingual route	19	70
Don't know	3	0
Satisfaction with SIT		
Very satisfied	26	15
Fairly satisfied	34	80
Somewhat satisfied	14	4
Not at all satisfied	24	0
Don't know	2	1

All values are given as percentage.

The subcutaneous and sublingual routes had both been used (Table 5). In the population questioned, 73% had completed their treatment and 50% of all patients undergoing SIT claimed they took less medication than before. The satisfaction rate of patients treated with SIT is shown in Table 5.

The satisfaction of patients as estimated by the doctors differed depending on whether the doctor was in favour of SIT or not. Overall, doctors favourable to SIT considered 94% of their patients to be satisfied ('very' or 'fairly'), while doctors who were less in favour of SIT estimated that only 56% of their patients were satisfied

(‘very’ or ‘fairly’). Allergists, who were particularly favourable to SIT, thought that most of their patients were ‘very’ (15%) or ‘fairly’ (80%) satisfied by the outcome of SIT (Table 5).

Discussion

The prevalence of AR appears to be on the increase worldwide (2), with serious public health (14) and economic (15, 16) consequences. Our study of patients aged 18–50 years found an overall prevalence of AR in France of 33%, which is higher than the mean prevalence of 24.5% reported by Bauchau et al. (3), but is in line with the prevalence of 30–35% reported by Neukirch et al. in subjects aged 20–44 years (1).

The reduction in the quality of life of adults with AR includes fatigue, decreased energy levels and disturbances of overall health and social function (17, 18). This under-recognized and inadequately treated condition is frequently associated with other disorders (19) including sinusitis and may develop into asthma (20).

The results of the present survey suggest that, in general, patients have a poor understanding of AR and its treatments, despite the considerable inconvenience it causes. Many of the patients screened as suffering from AR did not know that their symptomatology could be successfully treated and only 32% had sought help from a health professional. Allergic rhinitis is not usually perceived as a severe illness and some patients manage to live with it with only minor inconvenience. In most cases, however, the disease has a major impact on the patients’ lives because of its troublesome symptoms, the frequency of episodes and its duration, and most patients would appreciate being free of the condition.

A pharmaco-epidemiological survey has shown that, whereas 55% of patients scrupulously followed their doctor’s prescription, 44% frequently used self-medication (4). For efficient disease management, in addition to the diagnosis, choice of treatment and patient monitoring, a good understanding of this condition by the patient is essential to any therapeutic success. According to the current survey, the GP appears to play an important role in management of AR, followed by the allergist. However, it is worth noting that very few patients consulted an allergist directly. The survey shows that only half the patients had any treatment follow-up, which confirms the conclusion of the study of Demoly et al. (4). Patient satisfaction with symptomatic treatment was high (83%, including 34% very satisfied) while doctors (all specialities) were satisfied in almost 90% of cases. Therefore, it is reasonable to ask ‘Why don’t more patients seek treatment?’ A

fatalistic attitude ‘You have to live with it’ may prevent some patients from seeking help. In addition AR is not really considered an illness among the general population.

The present survey was particularly intended to explore the way that SIT is perceived by patients and health professionals, and its relevance in the relief of patients with this pathology. The survey indicates a low level of awareness with only half of the patients having any knowledge of SIT. Over 50% of these, however, had a positive image of the therapy, while among doctors, two-thirds had a positive image (over 80% of allergists). Whereas patients tended to associate SIT with the notions of well-being, seriousness and recovery, doctors were attracted by its aetiological characteristics, its efficacy and the well-being it induced in patients. A similar difference of priorities between patients and physicians was again found among those with a negative perception of SIT, with treatment duration the major inconvenience for patients, whereas doctors primarily mentioned outcome uncertainty. Among patients ready to undergo SIT, the principal motivation was its efficacy from the first year with the associated improvement in quality of life, while for doctors, the decrease in symptomatic treatments was as important as the probability of recovery.

The survey was also aimed at studying patients who had undergone SIT. Treated subjects (78% via the subcutaneous route) were generally satisfied with SIT (60%). These results are similar to those of other studies which evaluated efficacy and innocuousness of SCIT (7). The subcutaneous route is widely seen as inconvenient and sublingual formulations, particularly the sublingual tablet, suitable for home use, were recognized in this survey as significant progress. This galenic form, which has demonstrated efficacy and tolerability in seasonal rhinoconjunctivitis in a number of studies (21, 22), is likely to be welcomed with interest by patients and doctors as an addition to the therapeutic armamentarium against AR.

In conclusion, many patients with AR are unaware of their pathology and are resigned to ‘put up with’ the symptoms with the result that few seek help from health professionals. When the patients take medication, however, they are generally satisfied with their treatment, even if it is only symptomatic. Doctors’ satisfaction with symptomatic treatment is also high. SIT is a preventive and curative (6, 23, 24) treatment for AR. Patients and physicians see the notion of definitive recovery as the main benefit of SIT, whereas the main disadvantage is the duration of treatment. The future availability of SIT in the form of a sublingual tablet is seen by both doctors and patients as a significant improvement likely to increase the use of this therapeutic option.

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