Original Research Article

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20214277

A study on awareness on allergic disorders and allergen immunotherapy among medical practitioners

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Received: 19 August 2021 **Accepted:** 16 September 2021

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ABSTRACT

Background: Allergy is a common ailment affecting more than 20% of the population worldwide. Allergic patients suffer from a debilitating disease with a major impact on their quality of life, work and school performance. Allergic disorders can be debilitating, with a major impact on their quality of life, work and school performance. AIT (Allergen immunotherapy), modify the natural history of allergic disease and prevent the progression of allergic respiratory diseases by maintaining a long-lasting effect. Since the awareness among medical practitioners plays very important role in advising AIT for allergy patients, we attempted to conduct this study.

Methods: This was a descriptive study done for a period of three months from December 2016 to February 2017. The 110 study subjects were recruited through purposive sampling. Doctors of various specialties and general practitioners were interviewed using self-administered, semi-structured questionnaire.

Results: There were 73 (66.36%) males and 37 (33.64%) females. Mean age of the medical practitioners was 35.73±13.07 (Mean±SD). 98 (89.09%) of the practitioners were aware of skin prick test for the diagnosis of allergy, 70 (63.3%) subjects had heard term AIT, 59 (84.28%) were aware about subcutaneous immunotherapy (SCIT) and 25 (35.71%) of sublingual immunotherapy (SLIT). Forty-four (62.96%) were not advising immunotherapy for their patients in spite of having awareness on immunotherapy. The common reasons for not advising immunotherapy were long duration of treatment, high cost, less effective, not available in India, fear of side effects and others.

Conclusions: Though the awareness among medical practitioners on AIT was good, majority are not advising because of long duration of treatment, high cost, less effective, not available in India, fear of side effects and others.

Keywords: Allergic disorders, AIT, Awareness, SCIT, SLIT

INTRODUCTION

Allergy is a common ailment affecting more than 20% of the population worldwide. Allergic disorders are on the rising trend both in developing and developed countries. International study on asthma and allergies in childhood (ISSAC) phase 3 study observed increasing trends in asthma, allergic rhino-conjunctivitis and eczema

worldwide in most of the centres when compared to phase 1 study findings.² Allergic disorders can be debilitating, with a major impact on their quality of life, work and school performance. It has been repeatedly shown that the available pharmacological treatments are neither capable of achieving a long-term effect once stopped, nor to induce significant immunological changes to alter the natural history of the disease.³

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Allergen immunotherapy (AIT) was introduced in 1911 by Leonard Noon and John Freeman. Allergen Immunotherapy is the only disease modifying treatment for IgE mediated allergic disorders with its effects beyond the cessation of treatment.4,5 Many clinical trials and meta-analyses have convincingly demonstrated that AIT9 is effective in reducing symptoms and drug consumption, with a consequent improvement of the overall quality of life. More importantly, there is evidence that AIT can modify the natural history of allergic disease, for instance preventing the onset of asthma in patients with allergic rhinitis (AR) and/or maintaining a long-lasting effect. Indeed, in the more recent guidelines and academic position statements, the use of AIT has been advocated for those patients with initial stages, also in order to prevent the progression of allergic respiratory diseases.⁶

AR and its impact on asthma (ARIA) guidelines recommend allergen specific Immunotherapy as therapeutic vaccine for patients with moderate to severe persistent AR.⁷ Global initiative for asthma (GINA) guidelines 2018, recommends allergen immunotherapy for patient with respiratory allergy in selected cases.⁸

Even though immunotherapy is 100-year-old treatment and despite the evidences, AIT has not yet received adequate attention from medical practitioners. The use of AIT is less and not commonly used modality of treatment. Awareness among medical practitioners plays a very important role in advising AIT for allergy patients. There is a scarcity in availability of literature regarding awareness among medical practitioners with very few studies. Hence, we attempted to conduct this study.

METHODS

This was a descriptive study. Study subjects were recruited through purposive sampling technique. Doctors of various specialties and general practitioners were interviewed using self-administered, semi-structured questionnaire. Details on demographic characteristics, specialization, awareness regarding different allergic tests available, awareness with regards to types of immunotherapies etc. were collected through questionnaire. All participant doctors who volunteered and consented to fill the questionnaires were included in study. Total number of study subjects recruited were 110.

Data was entered in MS excel and analyzed using Stata 12.1. Results were expressed through descriptive statistics like frequencies, percentages, median, standard deviation, IQR (Inter quartile range). Shapiro Wilk test was applied to test normal distribution of data for required variables.

RESULTS

There were 73 (66.36%) males and 37 (33.64%) females. Mean age of the study subjects was 35.73±13.07 years (Mean±SD). Median duration of the practice of study subjects was 8 years with IQR 14.5 (2-16.5)

Table 1 indicates majority of study subjects were not specialized i.e., 52 (47.27%). Among specialists' dermatology was major in number 23 (20.9%).

Table 1: Distribution of study subjects according to specialization, (n=110).

Specialist	Frequency	Percentage (%)
Dermatology	23	20.90
Medicine	18	16.36
ENT	03	2.72
Pediatrics	06	5.45
Pulmonology	01	0.90
MBBS	52	47.27
Others	10	6.40

Most common age group in which allergy cases were seen was 10-20 years followed by 30-40 years. AR (33.70%), followed by bronchial asthma (24.40%) are the common allergy cases seen in their practice in Table 2.

Table 2: Awareness on allergen immunotherapy among study subjects.

Parameters		N	%
Age group in which allergy cases were seen (years)*	<5	17	15.45
	5-10	27	24.55
	10-20	58	52.73
	20-30	49	44.55
	30-40	36	32.73
	40-50	10	9.09
	>50	12	10.91
Average number of allergy cases seen per week*	AR	1492	33.70
	Bronchial asthma	1080	24.40
	Urticaria	788	17.80
	Allergic conjunctivitis	235	5.31
	Food allergy	310	7.00
	Drug allergy	283	6.39
	Anaphylaxis	78	1.76
	Others	161	3.64
Source of	Conferences/CME/ workshops	32	45.71
information on	Colleagues	25	35.71
allergen	Journal articles	24	34.28
immune-	Text books	23	32.85
therapy*	Others (media, internet)	2	2.85
Awareness on	SCIT	59	84.28
types of			35.71
immune-	Both	20	28.57
therapies	None	42	60

^{*}Multiple responses

Table 2 describes awareness on AIT. It was observed that 98 (89.09%) of the study subjects were aware of skin prick test for the diagnosis of allergy. There were 70 (63.3%) subjects who had heard the term AIT. Out of 70 study subjects, 59 (84.28%) were aware about SCIT and

25 (35.71%) were aware of SLIT. Most common source of information on allergen immunotherapy were conferences/CME/workshops (32, 45.71%) followed by colleagues (25, 35.71%), journal articles (24, 34.28%), textbooks (23, 32.85%) and others like internet (2, 2.85%).

Table 3: Reasons for not advising allergen immunotherapy, (n=44).

Reasons	N
Fear of side effects	1 (2.27)
Less effective	9 (20.45)
Ineffective cost	21 (47.72)
Long duration of treatment	26 (59.09)
Not available in India	3 (6.81)
Others*	12 (27.27)

*Others-Refer to specialist, didn't know where it was done, Injections daily, don't know the exact details or the practical results, unaware of where the treatment is provided, not available in my setup (govt), no experience with this form of therapy, Pt have responded to antihistamines and did not require immunotherapy, information regarding don't know, patient not willing, never got a chance.

DISCUSSION

Allergic disorders are the common disorders. Allergic disorders are progressive AR is not a serious condition but affects the quality of life to a larger extent. AR also impairs sleep quality and cognitive function causing irritability and fatigue. Mortality is rare except in severe form such as Bronchial asthma and anaphylaxis. AR is associated with decreased school and work performance, especially during the peak pollen season. AR is a frequent reason for general practice office visits. Appropriate treatment of AR improves symptoms, quality of life, work and school performance. AIT is a disease modifying agent which offers preventive care, improves quality of life.

AR is one among the most common diseases globally and usually persists throughout life. The prevalence of self-reported AR has been estimated to be approximately 2% to 25% in children similar to our study which showed 30.91%. The 24.32% adults had AR in contradictory to Brożek et al study where more than 40% of adults had AR. Prevalence of confirmed AR in adults in Europe ranged from 17% to 28.5%.⁷

AR currently affects between 10 and 30% of population.¹

AR is also frequently associated with asthma, which was found in 15% to 38% of patients with AR. AR is a risk factor for asthma and uncontrolled moderate-to-severe AR affects asthma control. 10-13

Trends in prevalence of asthma, allergic rhinoconjunctivitis, and eczema over time increases, being more common in 6-7-year age-group than in the 13-14-year age-group. But in our study allergy cases were seen more in 10-20 years group compared to 5-10 years age group. A study showed that, 50% of general practitioners were aware of the exact placement of immunotherapy in par with our study where 59% were aware on AIT.⁷

There was a satisfactory knowledge of the characteristics of AIT, which was par with our study. The majority of pediatricians felt that a more intense divulgation and information about AIT would be needed (90%).⁶

Compared with other medical conditions, AR might not appear to be serious because it is not associated with severe morbidity and mortality. However, the burden and costs are substantial. Hence, AIT is the only allergenoriented therapy, and acts as a disease-modifying treatment. Thus, AIT can not only modify symptoms in the short-and medium-term period, but can change the progression of the disorder. The disease-modifying effect can be seen as the reduction of the risk of asthma onset in children with rhinitis, and as the persistence of the clinical benefit for several years after the discontinuation.

Majority of the medical practitioners have heard the term AIT, but majority were not advising AIT. The practice of AIT is poor. There is a need to improve awareness on AIT among medical practitioners so that a greater number of practitioners consider advising AIT to patients. Increasing awareness among general population on AIT and its benefits is also a need of the hour. Majority of the medical practitioners are not advising AIT because of long duration of treatment, high cost, less effective, not available in India, fear of side effects and others. Even though AIT is 100 years old treatment, it has not got popularity as expected. Hence acquaintance among medical practitioners to consider AIT in the line of management for allergic disorders is essential.

CONCLUSION

Though the awareness among medical practitioners on AIT was good, majority are not advising because of long duration of treatment, high cost, less effective, not available in India, fear of side effects and others.

Funding: No funding sources Conflict of interest: None declared

Ethical approval: The study was approved by the

Institutional Ethics Committee

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Cite this article as: Gowda G, Pruthvi S.,

Phaneendra MS, Nagaraj C. A study on awareness on allergic disorders and allergen immunotherapy among medical practitioners. Int J Community Med Public Health 2021;8:5394-7.