

Allergic rhinitis: Clinical characteristics and the level of awareness about the disease and its complications in allergic rhinitis patients

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ABSTRACT

Background: Allergic rhinitis is one of the very common conditions observed in clinical practice with an increasing incidence and prevalence. It results in decreased productivity and absenteeism. Due to the complications and co-morbidities associated with allergic rhinitis, it is a major health concern. Patients develop complications because of lack of awareness about the disease and inappropriate or incomplete treatment. In view of this, the present study was conducted to study the clinical characteristics of the disease in patients with allergic rhinitis attending Ear, Nose and Throat (ENT) department in a tertiary care centre as well as to evaluate the level of awareness about the disease and its complications among these patients.

Materials & Methods: All allergic rhinitis patients attending the ENT Department were included in the study. Patients were verbally administered the questions from a well structured questionnaires and the responses were documented. The questions were structured to elicit information regarding the clinical characteristics of the disease, patient's awareness about the disease and its complications. Results were tabulated and evaluated. A comparison of the study data to the historical data from published literature was also undertaken.

Results: Of the hundred patients administered with the questionnaire, patients of the age group of 31 to 40 years of age (28%) were the most commonly affected. The most common symptoms observed were sneezing, watery discharge from the nose and itching in the nose seen in 97% of the patients followed by nose block, seen in 91% of the patients. 83% of the patients reported worsening of the symptoms on exposure to dust; 69% had bouts of sneezing early in the morning on waking up and 62% of the patients had seasonal variation of symptoms. 32% of the patients also had the symptoms of allergic conjunctivitis and 29% of the patients bronchial asthma. 38% of the patients were aware of the common allergens and 20% said they were aware of possible complications like sinusitis, nasal polyps. 25% understood the

need for regular treatment to avoid complications of allergic rhinitis. Only 5% said they may develop bronchial asthma.

Conclusion: Though allergic rhinitis is a common disease causing morbidity and complications, patient awareness about the disease is inadequate. Considering the high prevalence of the disease, health education about the disease including etiology, avoidance and management to the population and allergic rhinitis patients is necessary.

Keywords: Allergic rhinitis, Bronchial asthma, awareness, complications

INTRODUCTION

Allergic rhinitis (AR) is a common and recurrent disease in the developed world and its incidence is increasing in the developing country. Around 600 million people worldwide suffer from AR; 200 million of them have concomitant bronchial asthma. The prevalence varies in different regions and affects up to 50% of the population in some countries. It affects the daily functioning (school and work) and quality of life. The disease is a burden to the patients as well as their families.^{1,2}

Allergic rhinitis is an IgE mediated allergic disease, characterized by bouts of sneezing, watery nasal discharge, post nasal drip, itchy nose and bilateral nasal obstruction. The disease burden and its consequences are often underestimated by clinicians and patients. Many a times patients and clinicians trivialize the symptoms, under-diagnose it and miss or under-treat it leading to uncontrolled symptoms affecting quality of life at work and home as well as having an impact on social life.^{1,3}

Allergic rhinitis is classified into the mild or moderate to severe groups according to the severity of symptoms. It is also classified into the intermittent or persistent groups according to the duration of symptoms.⁴

Allergic rhinitis is a part of a spectrum of allergic disorders consisting of asthma, chronic middle ear effusions, sinusitis, nasal polyposis and lymphoid hypertrophy with obstructive sleep apnea, disordered sleep, and consequent behavioral and educational effects. Complications of this

disease are numerous and can have a significant impact, both mentally and physically. So it is important not only to detect, investigate and treat allergic rhinitis but also to actively identify and prevent/treat potential complications.^{5,6}

Allergic rhinitis frequently coexists with bronchial asthma and sinusitis and is a predisposing factor for both. In addition, nasal inflammation and obstruction directly affect pulmonary function and clinical symptoms of asthma. Treating allergic rhinitis with antihistamines, nasal corticosteroids, immunotherapy and allergen avoidance have a significant positive effect on lung function and asthma symptomatology.⁷

MATERIALS & METHODS

This was a prospective study conducted in the Department of ENT, in a tertiary care hospital, Bangalore, Karnataka. Hundred patients with allergic rhinitis attending the Department of ENT of a tertiary care centre during the period of study (2015); were presented with a set of structured questionnaires. The questionnaire included questions regarding the frequency and severity of the AR-related symptoms, a history of allergic disease, existence of olfactory dysfunction, coexisting diseases such as bronchial asthma and conjunctivitis, skin diseases, aggravating factors, awareness about the nature of the disease and its complications. The data was tabulated and the results were analyzed. Descriptive statistics in terms of frequency and percentages are reported.

RESULTS

A total of 100 allergic rhinitis patients were administered the questionnaire in this study. Age of the patients ranged from 6 to 68 years, both inclusive [Figure 1]. Allergic rhinitis was seen more commonly in the age group of 31-40 years (28%). 52 patients were males and 48 were females [Figure 2].

Figure-1: Age distribution of allergic rhinitis

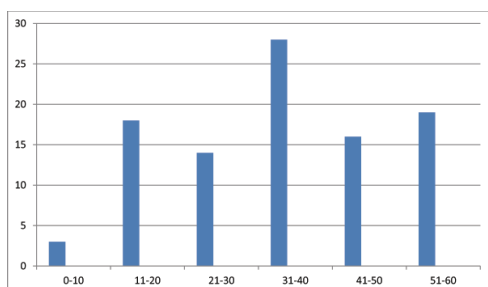
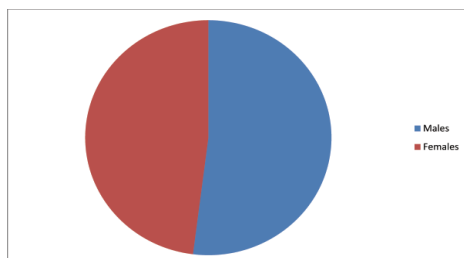
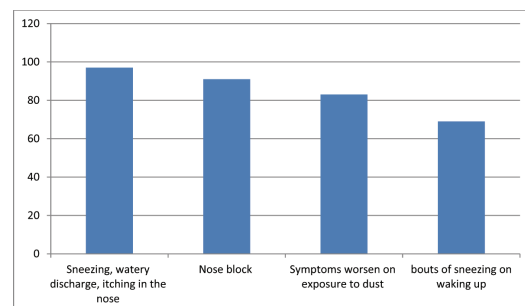


Figure-2: Sex distribution of allergic rhinitis



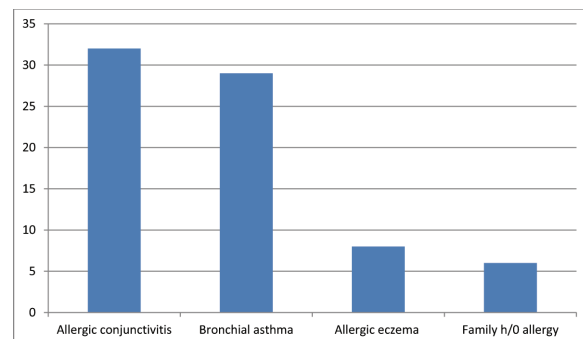
Sneezing, watery discharge from the nose and itching in the nose were the most common symptoms observed in 97% of the patients. This was followed by nose block seen in 91% of the patients. Worsening of the symptoms on exposure to dust was observed in 83% and 82% said they tend to catch allergy often. About 69% patients said they have bouts of sneezing when they wake up early in the morning. 62% said there symptoms get worse in a particular season [Figure 3].

Figure -3: Percentage of allergic rhinitis patients having different symptoms



Of these patients, 32% had the symptoms of allergic conjunctivitis, 29% patients said they also have bronchial asthma. Only 8% of patients had associated allergic skin disease and 6% gave the history allergy in the family [Figure 4].

Figure 4: Percentage of allergic rhinitis patients having other associated allergic diseases



Around 38% of the patients knew the common allergens which are triggering factors for allergic rhinitis. 25% said they know it requires regular treatment over a prolonged period. Only 20% said they knew that if it is not treated appropriately, it may result in the development of complications. 5% of the patients said, if untreated they may develop Bronchial Asthma.

DISCUSSION

Allergic rhinitis is clinically defined as a symptomatic disorder of the nose induced by an immunoglobulin E-mediated inflammation of the membranes of the nose following allergen exposure. Chronic or acute inflammation of the mucous membrane of the nose due to allergens results in the generation of excessive amounts of mucus and fluid; commonly producing runny nose, nasal congestion, itching of

the nose and soft palate and bouts of sneezing. Usually, diagnosis of allergic rhinitis is done based on the above typical clinical picture. In our study 97% patients had sneezing and watery nasal discharge and itching, 91% had nasal congestion and 32% had allergic conjunctivitis. These observations are in line with published literature.³ [Table 1]

Table 1: Comparison study of clinical presentation of allergic rhinitis.

Parameters	Our study	H.Van Hoecke et al ³
Sneezing and nasal itching	97%	89%
Nasal block	91%	86%
Allergic Conjunctivitis	32%	70%

We believe that tests for allergy are not routinely required, as diagnosis of allergic rhinitis is possible by medical history which has 85% predictive value. So, the probability of false diagnosis as allergic rhinitis based on history alone is very low.

It has been said that allergic rhinitis and bronchial asthma are different manifestations of the same disease due to involvement of different structures, neighboring tissues of the airway and similar pathophysiological characteristics. This has been called as "one airway one disease" or "united airway disease". In our study, 29% of the patients had associated bronchial asthma. This is similar to the observation in the study conducted by Bugiani *et al.*⁸ [Table 2]

Table 2: Comparison study of bronchial asthma among allergic rhinitis.

Parameters	Our study	Bugiani <i>et al.</i> ⁸
Bronchial asthma among allergic rhinitis patients	29%	26%

Presence of other associated allergic diseases such as allergic eczema, asthma, are predictors of less chance of remission from allergic rhinitis. These findings indicate that existence of other allergic diseases in patients with allergic rhinitis will reduce the possibility of remission of allergic rhinitis.⁸ Some studies have shown higher prevalence of AR, but not of asthma in patients of higher socioeconomic class. It may be due to better /appropriate therapy available and better education on how to correctly treat allergic rhinitis in that class of population, thus reducing the risk of development of bronchial asthma.⁸

In our study, 25% of the patients said that they know that AR requires regular treatment for prolonged period while the remaining majority of patients are not aware about it. In a

similar study conducted by Larsen *Cet al* in Denmark showed 43.6% of persons with AR had not received any treatment in the previous 12 months.^{9,10} This can be considered an indicator that patients, both in developing and developed country, lack awareness about the nature of the disease and its treatment resulting in under-treatment. This will affect the quality of life, productivity and development of complications. These suggest the need for activities for increasing the awareness and educate patients about allergic rhinitis with regards to diagnosis and treatment to prevent complications.

CONCLUSION

Allergic rhinitis patients in the study had clinical features typical of the disease characterized by: of bouts of sneezing, profuse watery nasal discharge, nasal pruritis over prolonged period of time; seen in 97% of the patients. In practice, allergic rhinitis can be diagnosed by history and examination without need for any investigations routinely, since the group of typical feature components of allergic rhinitis are unique to the disease. Allergic rhinitis patients need regular treatment over prolonged period of time not only to improve quality of life, productivity but also to prevent secondary complications of it. Prevalence of other allergic diseases such as allergic conjunctivitis, bronchial asthma, allergic eczema among allergic rhinitis patients is significant. So in all patients with allergic rhinitis one should try to find out other associated allergic diseases and treat accordingly in consultation with respective specialities.

Considering the high prevalence of the disease, its associated morbidity, late complications and lack of awareness about the disease; there is need to educate the public and increase the awareness about the disease, complications of the disease and the need to regular treatment.

REFERENCES

1. D.Ryan, C. van wheel, J. Bousquet, E. Toskola, S. Ahlstedt, S. Palkonen et al. Primary care: the cornerstone of diagnosis of Allergic rhinitis. *Allergy* 2008;63:981-985.
2. U. Nihlen, L. Greiff, P. Montnemery, C.-G. Lofdahl, A. Johannisson, C. Persson et al. incidence and remission of self reported allergic rhinitis symptoms in adults. *Allergy* 2006;61:1299-1303.
3. H.Van Hoecke, N. Vastesaegeer, L.Dewulf, L. Sys, P.van Cauwenberge. Classification and management of allergic rhinitis patients in general practice during pollen season. *Allergy* 2006;61:705-709
4. Chul Hee Lee, Jeong Hun Jang, Hyun Jong Lee, Ic-Tae Kim, Mu Jin Chu, Chun Dong Kim. Clinical characteristics of Allergic rhinitis According to Allergic rhinitis and its impact on Asthma Guidelines. *Clinical and Experimental Otolaryngology*, 2008, Vol 1, No 4, 196-200.

5. Sacre Hazouri JA. Allergic rhinitis. Coexistent diseases and complications. A review and analysis. *Rev Alerg Mex.* 2006 Jan-Feb;53(1):9-29- ABSTRACT
6. Borres MP. Allergic rhinitis: more than just a stuffy nose. *Acta Paediatr.* 2009 Jul;98(7):1088-92.
7. Gary S. Rachelefsky. National guidelines needed to manage rhinitis and prevent its complications. *Ann Allergy Asthma Immunol.* 1999 Mar;82(3):296-305.
8. M. Bugiani, A. Carosso, E. Migliore, P. Piccioni, A. Corsico, M. Olivieri et al. Allergic rhinitis and asthma comorbidity in a survey of young adults in Italy. *Allergy* 2005;60:165-170.
9. O O Desalu, AK Salami, KR Iseh, PO Oluboyo. Prevalence of self reported Allergic rhinitis and its relationship with Asthma among adult Nigerians. *J. Investig Allergol Clin Immunol* 2009; Vol 19(6): 474-480.
10. Gronhoj Larsen C, Gyldenlove M, Linneberg A. Allergic rhinitis is often undiagnosed and untreated: results from a general population study of Danish adults. *Clin Respiratory J.* 2013 Oct:354-8.

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