

A Cross-Sectional Study on the Medical Characteristics of Allergic Rhinitis Cases in Bihar

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Abstract:

Background and Objective: Allergic rhinitis is a public health problem. In India, the burden of allergic rhinitis is tremendous, accounting for about 55% of all allergies. Roughly 20-30 per cent of the Indian population is affected by at least one allergic disorder. To investigate the clinical profile of patients with allergic rhinitis cases in Bihar.

Material and Methods: Tertiary care hospital patients attending the E.N.T. OPD have been taken into account. The history of all sampled patients and the clinical evaluation were detailed and 800 cases were included in this study. Study duration is July 2023 To June 2024.

Statistical Analysis: They were articulated in terms of plain proportion.

Results: The majorities of patients are under the age of 30 years and are in the third decade of life. It was observed that the proportion of blockers was much higher than sneezers and runners. Most of the predisposing factors were seasonal and house dust.

Conclusion: Allergic rhinitis can affect the physical, psychological and social aspects as well as the productivity of the job. There is an important need to raise awareness of different types of illness, including prevention, in the community.

Keywords: Allergic Rhinitis, Central India, Sneezers.

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Introduction

Allergic rhinitis is a public health problem. In India, the burden of allergic rhinitis is tremendous, accounting for about 55% of all allergies. Roughly 20-30 per cent of the Indian population is affected by at least one allergic disorder. The incidence of allergic rhinitis has been rising in India over the last few decades. Allergic rhinitis is primarily a symptomatic nose disease caused by inflammation of the mucous membrane lining the nose mediated by immunoglobulin E (IgE) after exposure to allergens. Nasal obstruction (blockage), rhinorrhea (runny nose), sneezing, itchy nose and post-nasal discharge are described. Asthma, sinusitis, otitis media, nasal polyposis, lower respiratory tract infection and dental malocclusion are other disorders associated with allergic rhinitis [1]. Indoor and outdoor allergens and environmental agents are risk factors for allergic rhinitis. Patients with allergic rhinitis are also known as sneezers-runners and blockers because of their particular clinical profile and need for particular approaches to treatment. Sneezing, anterior rhinorrhoea, itchy nose and eyes are key symptoms in patients who are primarily sneezer and runner, on the other hand, blockers have nasal congestion as predominant symptoms of nasal blockage and dense mucous which contribute to breathlessness of

postnasal discharge [2,3]. The classification of allergic rhinitis has been revised by the ARIA community in accordance with WHO. Allergic rhinitis is classified into a sporadic and chronic category according to the new classification and severity can be graded as mild, moderate / extreme. Intermittent means less than 4 days a week or less than 4 weeks of symptoms are present [4,5]. Persistent means more than 4 days a week and more than 4 weeks of symptoms are present. Mild symptoms Sleep disorders, impairment of everyday activities, impairment of work or school or other troubling symptoms mean that none of the following things are present. If it is called moderate / severe, one of the above things is present and symptoms are constant, day and night, but can intensify during the night [6]. The current research aims to define the clinical profile of patients with allergic rhinitis and to describe the relationship between prevalent symptoms of the disease and popular predisposing factors, type and severity of the disease.

Material and Methods

This research was performed for one year in a tertiary treatment centre's Department of Otorhinolaryngology (ENT). Eight hundred cases were included

in this research after the correct history and clinical review of those found to suffer from allergic rhinitis. Information of all cases sampled in the predrawn proforma were reported. With particular attention to sneezing, nasal blockage, scratching, nasal discharge, loss of smell, a comprehensive history was taken. The ear nose throat was carefully clinically examined and our diagnosis was confirmed by the appearance of pale or blue nasal mucosa and

hypertrophied boggy turbinate. An investigation was carried out about the history of patient allergens, but no skin allergy test was conducted. Family history was also documented with respect to any other allergies, socioeconomic status and occupation. In this analysis, children under the age of three years were removed.

Results

Table 1: Age wise Distribution

Sr. No.	Age in years	No. Of Cases	%
1	3-10	86	10.75
2	11-20	90	11.25
3	21-30	370	46.25
4	31-40	132	16.5
5	41-50	72	9
6	51-onwards	50	6.25
	Total	800	100%

Table 2: Case distribution of sneezers (runners) and blockers

Sr. No.	Type of allergic rhinitis	No. of Cases	%
1	Sneezer and runners	278	34.75
2	Blockers	522	65.25
	Total	800	100

Table 3: Case distribution according to type and severity

Sr. No.	Severity of symptoms	No. of Cases	%
1	Mild intermittent	128	16
2	Moderate/Severe intermittent	202	25.25
3	Mild persistent	218	27.25
4	Moderate/Severe persistent	252	31.5
	Total	800	100

Table 4: Distribution of cases according to symptoms

Sr. No.	Symptoms	No. Of Cases	%
1	Nasal Obstruction	522	65.25
2	Runny Nose	244	30.5
3	Sneezing	402	50.25
4	Nasal Itching	360	45.0
5	Post Nasal Drip	122	15.25

Table 5: Distribution of cases according to predisposing factors

Sr. No.	Factors	No. of Cases	%
1	House dust	322	40.25
2	Seasonal	330	41.25
3	Cold drink	40	05.0
4	Smoke	22	02.75
5	Food	08	01.00
6	Chemicals	18	02.25
7	Cosmetics	24	03.00
8	Medicines	16	02.00
9	Wheat flour	12	01.50
10	Fruits	08	01.00
	Total	800	100

It has been found that the majority of patients belong to the third decade of life (46.25 percent) after

analysing the data collected. Most patients were found to be under thirty years of age (68.25 percent)

in Table-1. There was a far higher proportion of blockers (65.25 percent) than sneezers and runners (34.75 percent) in Table-2. It has been found that the severity of symptoms is directly proportional to the length of the disease. Table-3 shows that 16 percent, moderate / severe intermittent 25.25 percent, mild persistent 27.25 percent, moderate / severe persistent 31.5 percent in all cases were mild intermittent symptoms. Patient symptoms of nasal obstruction (65.25%), sneezing (50.25%), nasal scratching (45%), runny nose (30.5%), and post nasal drip (15.25) are shown in Table-4. Seasonal (41.25 percent) and house dust (40.25 percent) were predisposing factors in most cases and cold drink, smoke food, chemicals, cosmetics, drugs, wheat flour and fruits were other factors (Table-5). indicates that the highest number of patients was in the month of October (15.25%), followed by September (11.25%), March (10.25%), January (9.75%) and the lowest number of patients was in February (4.5%).

Discussion

In the younger age group or under 30 years of age, the highest occurrence of allergic rhinitis was observed, with a minimum in the older age group. In old age, it may be due to immunosuppression, where the amount of antibodies and the number of T cells in the blood declines dramatically whereas they are much higher at a younger age [7,8]. In males, the higher prevalence of allergic rhinitis was significantly observed compared to females, likely due to more male exposure to allergens in the workplace. Diagnostic signs of allergic rhinitis include nasal obstruction, sneezing, runny nose, nasal itching and postnasal drip. Nasal obstruction was 65.25 percent in this collection, sneezing 50.25 percent, runny nose 30.5 percent, nasal scratching 45 percent, in all situations. Almost the same distribution of symptoms was stated by Clarke CH et al and Eccies R et al. For younger age groups or students, Fleming and Crombie et al recorded the highest incidence of allergic rhinitis. The incidence of allergic rhinitis in the younger age group was also more study to be more than sneezer-runner. Sha and Pawanker et al and Sahay et al. were very close to this result. In the current research, it was found, following the latest ARIA recommendations, that most patients with allergic rhinitis have a moderate / extreme persistent form of disease accompanied by mild persistent and moderate serious intermittent forms, whereas the mild intermittent category was far less frequent than other groups. This may be due to the fact that more patients were identified during the study period with increased severity. There were also very similar findings published by Alyas in and Amin et al. With modernisation, the number of

allergens is rising every day. Seasonal transition, house dust and industrial contamination have been observed by Sengupta RP et al as major predisposing factors of allergic rhinitis, which is very similar to this research. It was found in this study that 40.25 percent were allergic to house dust and 41.25 percent were more affected during the transition. Food allergies are found in 1 % of the total cases in this study and are due to food additives and preservatives [9,10].

Conclusion

The physical, psychological and social aspects of allergic rhinitis may be affected. It has an effect on the efficiency of the workplace and also on patients' behaviour, job performance and lifestyle. Due to excessive nose blowing and the need to rub eyes and nose, allergic rhinitis often causes hindrance at work. From the above observation and discussion, the author concluded that the community's knowledge of different aspects of the disease, particularly different symptoms, the influence of different allergens, and the importance of early detection and avoidance of allergens or predisposing factors, would help to manage the disease and improve the quality of life.

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