ORIGINAL RESEARCH

Allergic rhinitis among adults- A clinical study

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ABSTRACT

Background: An IgE-mediated inflammation of the membranes lining the nose causes allergic rhinitis, a symptomatic condition of the nose brought on by allergen exposure. The present study was conducted to assess cases of allergic rhinitis in adults. **Materials & Methods:** 85 patients of allergic rhinitis of both genderswere categorized based on the severity of symptoms and quality of life as "mild" or "moderate-severe," as well as the duration of the illness as "intermittent" or "persistent." Sneezing, eye problems, watery secretions, seromucous secretions, postnasal drip, smell abnormalities, and nasal blockage were among the symptoms noted. **Results:** Out of 85 patients, 45 were males and 40 were females. Common types was intermittentseen in 14, persistent in 26, mild in 25 and moderate-severe in 30 cases. Common clinical features were blocked nose in 57, eczema in 23, asthma in 12, sneezing seen in 51, itching eyes in 64, and running nose in 42 patients. The difference was non- significant (P> 0.05). **Conclusion:** The most common type of allergic rhinitis was persistent and most had clinical symptoms of itchy eyes and blocked nose.

Keywords: blocked nose, itchy eyes, allergic rhinitis

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INTRODUCTION

An IgE-mediated inflammation of the membranes lining the nose causes allergic rhinitis, a symptomatic condition of the nose brought on by allergen exposure. According to clinical definitions, it is a symptomatic condition with four main symptoms: sneezing, nasal irritation, nasal congestion, and anterior or posterior rhinorrhea.[1] Symptoms of allergic rhinitis include sleep disturbance, exhaustion, depression, and compromised cognitive function, all of which lower productivity and quality of life.[2] Conjunctivitis, postnasal drip, otitis media, sinusitis, Eustachian tube dysfunction, and in infants, dental malocclusions and facial abnormalities, may also be present.[3] Domestic allergens such as mites, domestic animals, insects, or plants, typical outdoor allergens like pollens and molds, and occupational triggers like latex and tobacco smoke, automobile exhaust include ozone, oxides of nitrogen and sulphur dioxide; aspirin and other non-steroidal anti-inflammatory drug can all cause allergic rhinitis.[4]

The WHO estimates that 400 million people worldwide suffer from allergic rhinitis, with a prevalence of 10% to 32% in the Asia Pacific area.[5] In India, there are very few community-based studies that identify the burden and contributing variables of allergic rhinitis, despite the high prevalence.[6] The majority of asthmatics also have rhinitis. Up to 40% of patients with seasonal or permanent allergic rhinitis have or will have asthma, which greatly increases the likelihood of developing asthma. Allergy rhinitis is often preceded by atopic eczema. Most often, people who have allergic rhinitis also have allergic conjunctivitis.[7]The present study was conducted to assess cases of allergic rhinitis in adults.

MATERIALS & METHODS

The present study comprised of 85 patients of allergic rhinitis of both genders. All patients were informed regarding the study and written consent was obtained.

Demographic data such as name, age, gender etc. was recorded. According to the most recent classification of allergic rhinitis as recommended by ARIA (Allergic Rhinitis and its Impact on Asthma) guidelines, cases were categorized based on the severity of symptoms and quality of life as "mild" or "moderate-severe," as well as the duration of the illness as "intermittent" or "persistent." Sneezing, eye problems, watery secretions, seromucous secretions, postnasal drip, smell abnormalities, and nasal

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blockage were among the symptoms noted. The quality of life questionnaire for rhinoconjunctivitis can be used to gauge how severe symptoms are. Results of the study were assessed statistically. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of cases

Total- 85		
Gender	**Males**	**Females**
Number	45	40

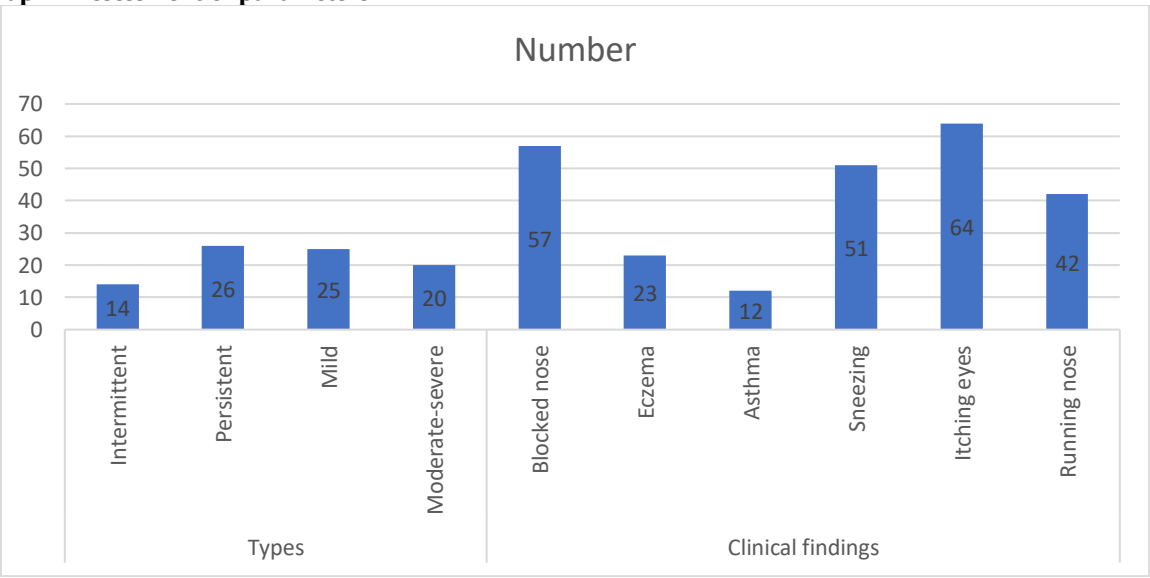
Table I shows that out of 85 patients, 45 were males and 40 were females.

Table II Assessment of parameters

Parameters	Variables	Number	P value
Types	Intermittent	14	0.70
	Persistent	26	
	Mild	25	
	Moderate-severe	20	
Clinical findings	Blocked nose	57	0.84
	Eczema	23	
	Asthma	12	
	Sneezing	51	
	Itching eyes	64	
	Running nose	42	

Table II, graph I shows that common types was intermittent seen in 14, persistent in 26, mild in 25 and moderate-severe in 30 cases. Common clinical features were blocked nose in 57, eczema in 23, asthma in 12, sneezing seen in 51, itching eyes in 64, andrunning nose in 42 patients. The difference was non- significant (P> 0.05).

Graph I Assessment of parameters



DISCUSSION

AR typically presents at a younger age and more common in boys. Seasonal rhinitis is more prevalent among children, but adults are more affected by perennial rhinitis. Around one fifth of individuals with rhinitis develop asthma in their later life.[8] Individuals sensitized with perennial allergens (dust mite) are more prone to develop asthma than individuals having sensitization with seasonal allergens (pollen grains).[9] Genetic predisposition to atopy may be a factor deciding susceptibility to develop allergic rhinitis or asthma. There is a significant geographic variation in prevalence of allergic rhinitis, asthma & other atopic diseases. Individuals having severe, persistent AR are more susceptible to develop asthma.[10] Sneezing, nasal pruritus, airflow restriction, and primarily clear nasal discharge are symptoms of allergic rhinitis, which is brought on by IgE-mediated responses to inhaled allergens and involves mucosal inflammation fueled by type 2 helper T (Th2) cells.[11] In addition to perennial indoor allergies including dust mites, pets, vermin, and some molds, seasonal pollens and molds

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are also significant allergens.[12,13] The general prevalence of allergy sensitization is the same across U.S. census tracts, while the pattern of major allergens varies by geographic location and level of urbanization. The first year of life is when sensitization to inhaled allergens starts; indoor allergen sensitization comes before pollen sensitization.[14,15]The present study was conducted to assess cases of allergic rhinitis in adults.

In present study, out of 85 patients, 45 were males and 40 were females. According to Chawes et al[16], data on symptoms, risk factors, and treatment-seeking behavior were gathered using a pre-tested questionnaire. The diagnosis of allergic rhinitis was made in accordance with ARIA recommendations. Spirometry was performed on them in order to diagnose asthma. To determine the relationship between risk factors and disease, multivariate logistic regression analysis was performed. It was discovered that 11% (132 participants) had allergic rhinitis, and 33.3% (44 patients) also had asthma. Independent risk variables for rhinitis included overcrowding (aOR = 6.4), lack of cross-ventilation (aOR = 2.5), dust/smoke exposure at work (aOR = 2.1), tobacco use (aOR = 2.1), family history of allergic illnesses (aOR = 2.7), and clinical allergy (aOR = 10.2).

We observed that common types was intermittentseen in 14, persistent in 26, mild in 25 and moderate-severe in 30 cases. Common clinical features were blocked nose in 57, eczema in 23, asthma in 12, sneezing seen in 51, itching eyes in 64, and running nose in 42 patients. Of the 1511 students who answered the SFAR questionnaire, 291 (47.4% of males and 52.6% of girls) had AR, according to Newacheck et al.[17] The most frequent cause of the illness was household dust. Rhinorrhea (76.6%), epiphora (76.3%), nasal congestion (64.3%), and itching (54.3%) were the most prevalent symptoms of AR. The Allergy Rhinitis and its Impact on Asthma (ARYA) scale indicates that 58.1% of students had mild rhinitis and 41.9% had moderate-to-severe rhinitis. Of patients with moderate-to-severe rhinitis, 56.9% had an intermediate state and 43.1% had a chronic condition. According to the results of the SF-36 questionnaire, students with AR differed significantly from their healthy counterparts in terms of bodily pain and physical functioning.

The shortcoming of the study is small sample size.

CONCLUSION

Authors found that the most common type of allergic rhinitis was persistent and most had clinical symptoms of itchy eyes and blocked nose

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