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Original Research

Assessment of allergic rhinitis in adults

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ABSTRACT:

Background: Allergic Rhinitis is a symptomatic disorder of the nose induced after allergen exposure due to an IgE-mediated inflammation of membranes lining the nose. The present study was conducted to assess cases of allergic rhinitis in adults. **Materials & Methods:** 110 patients who reported to ENT department for the complaint of allergic rhinitis of both genders was recorded. Cases were classified based on recent classification of allergic rhinitis as suggested by ARIA (Allergic Rhinitis and its Impact on Asthma) guidelines is on the basis of duration as ''intermittent'' or ''persistent'' disease, severity of symptoms and quality of life as ''mild'' or ''moderate-severe''. **Results:** Common types was intermittent seen in 22, persistent in 38, mild in 30 and moderate severe in 20 cases. The difference was non- significant (P> 0.05). common clinical features were sneezing seen in 90, itching eyes in 102, running nose in 80, blocked nose in 56, eczema in 39 and asthma in 12 patients. The difference was significant (P< 0.05). **Conclusion:** Most common type was persistent and clinical findings was itching eyes and running nose.

Key words: Asthma, allergic rhinitis, running nose

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INTRODUCTION

Allergic Rhinitis is a symptomatic disorder of the nose induced after allergen exposure due to an IgE-mediated inflammation of membranes lining the nose. It is clinically defined as a symptomatic condition with four major symptoms as anterior or posterior rhinorrhoea, sneezing, nasal itching & nasal congestion.[1] Allergic Rhinitis symptoms result in sleep disturbance, fatigue, depressed mood and cognitive function compromise that impairs quality of life and productivity.[2] There may be associated conjunctivitis, postnasal drip, Eustachian tube dysfunction, otitis media, sinusitis & in children, dental malocclusions & facial deformities also. Triggers of Allergic rhinitis are domestic allergens as mites, domestic animals, insects or of plant origin; common outdoor allergens include pollens and moulds; occupational triggers as latex; tobacco smoke; automobile exhaust include ozone, oxides of nitrogen and sulphur dioxide; aspirin and other non-steroidal anti-inflammatory drug.[3]

According to WHO, the global burden of allergic rhinitis was estimated to be 400 million and the prevalence among adults ranges between 10% and 32% in Asia Pacific region.[4] Despite the high burden, there is paucity of community based studies in India, determining the burden and factors associated with allergic rhinitis. Most people with asthma have rhinitis. The presence of allergic rhinitis (seasonal or perennial) significantly increases the probability of asthma: up to 40% of people with allergic rhinitis have or will have asthma.[5] Atopic eczema frequently precedes allergic rhinitis. Patients with allergic rhinitis usually have allergic conjunctivitis as well. The factors determining which atopic disease will develop in an individual person and the reasons why some people have only rhinitis and others have rhinitis after eczema or with asthma remain unclear.[6] The present

study was conducted to assess cases of allergic rhinitis in adults.

MATERIALS & METHODS

The present study comprised of 110 patients who reported to ENT department for the complaint 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. Cases were classified based on recent classification of allergic rhinitis as suggested by ARIA (Allergic Rhinitis and its Impact on Asthma) guidelines is on the basis of duration as ‘‘intermittent’’ or ‘‘persistent’’ disease, severity of symptoms and quality of life as ‘‘mild’’ or ‘‘moderate-severe’’. Symptoms such as sneezing, eye symptoms and watery secretions, seromucous secretions, postnasal drip, smell disturbances, nasal obstruction were recorded. Rhinoconjunctivitis quality of life questionnaire can be used to assess the severity of symptoms. Results of the study were assessed statistically. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of cases

Total- 110		
Gender	**Males**	**Females**
Number	60	50

Table I shows that out of 110 patients, males were 60 and females were 50.

Table II Types of allergic rhinitis

Types	Number	P value
Intermittent	22	0.10
Persistent	38	
Mild	30	
Moderate-severe	20	

Table II graph I shows that common types was intermittent seen in 22, persistent in 38, mild in 30 and moderate-severe in 20 cases. The difference was non- significant (P> 0.05).

Graph I Types of allergic rhinitis

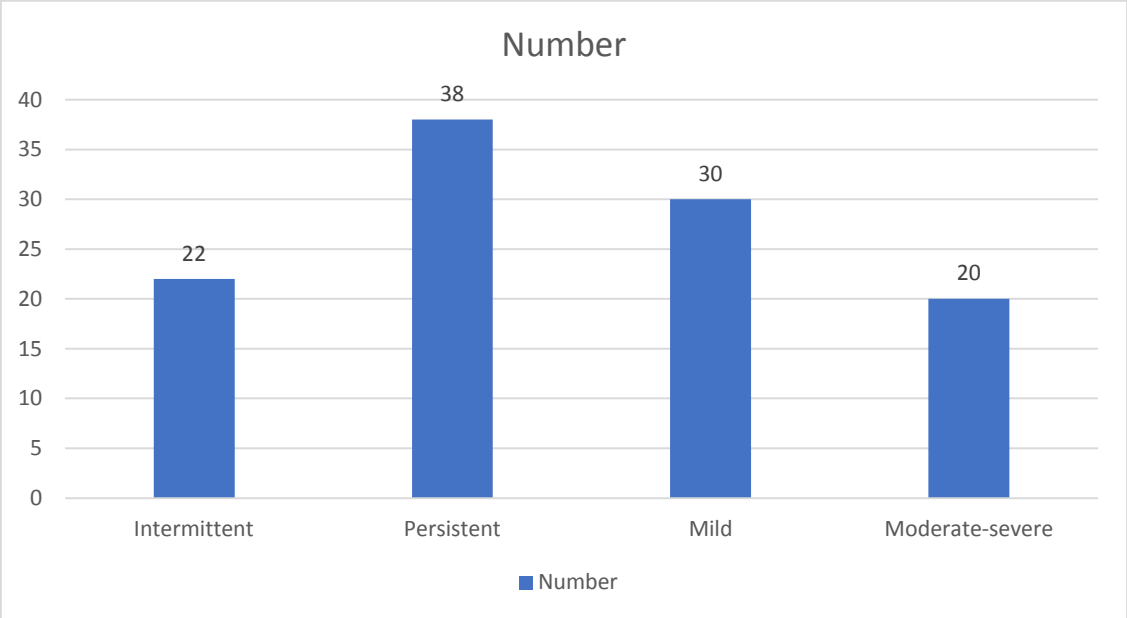

Table III Clinical findings of patients

Clinical findings	Number	P value
Sneezing	90	0.05
Itching eyes	102	
Running nose	80	
Blocked nose	56	
Eczema	39	
Asthma	12	

Table III shows that common clinical features were sneezing seen in 90, itching eyes in 102, running nose in 80, blocked nose in 56, eczema in 39 and asthma in 12 patients. The difference was significant (P< 0.05).

DISCUSSION

Allergic rhinitis is defined as symptoms of sneezing, nasal pruritus, airflow obstruction, and mostly clear nasal discharge caused by IgE-mediated reactions against inhaled allergens and involving mucosal inflammation driven by type 2 helper T (Th2) cells.[7] Allergens of importance include seasonal pollens and molds, as well as perennial indoor allergens, such as dust mites, pets, pests, and some molds.[8] The pattern of dominant allergens depends on the geographic region and the degree of urbanization, but the overall prevalence of sensitization to allergens does not vary across census tracts in the United States.2 Sensitization to inhaled allergens begins during the first year of life; sensitization to indoor allergens precedes sensitization to pollens.[9] Because viral respiratory infections occur frequently in young children and produce similar symptoms, it is very difficult to diagnose allergic rhinitis in the first 2 or 3 years of life. The prevalence of allergic rhinitis peaks in the second to fourth decades of life and then gradually diminishes.[10] The present study was conducted to assess cases of allergic rhinitis in adults.

In present study, out of 110 patients, males were 60 and females were 50. Newacheck et al[11] found that 1511 students who completed the SFAR questionnaire, 291 (52.6%, girls; 47.4%, boys) had AR. Domestic dust was the most common cause of the disease. The most common symptoms of AR were rhinorrhea (76.6%), epiphora (76.3%), nasal congestion (64.3%), and itching (54.3%). According to the ARYA scale, (Allergic Rhinitis and its Impact on Asthma), 41.9% of students had moderate-to-severe rhinitis and 58.1% had mild rhinitis. A total of 43.1% of patients with moderate-to severe rhinitis had a persistent condition and 56.9% had an intermediate condition. Results of the SF-36 questionnaire among students with AR showed a significant difference in physical functioning and bodily pain in comparison with healthy students.

We found that common types was intermittent seen in 22, persistent in 38, mild in 30 and moderate-severe in 20 cases. 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. Individuals sensitized with perennial allergens (dust mite) are more prone to develop asthma than individuals having sensitization with seasonal allergens (pollen grains). 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.[12]

We found that common clinical features were sneezing seen in 90, itching eyes in 102, running nose in 80, blocked nose in 56, eczema in 39 and asthma in 12 patients. Chawes et al[13] found that a pre-tested questionnaire was used to collect information regarding symptoms, risk factors and treatment seeking behaviour. Allergic Rhinitis was diagnosed as per ARIA guidelines. Spirometry was done to diagnose asthma among them. Multivariate logistic regression analysis was done to find the association of risk factors with disease. The prevalence of Allergic Rhinitis was found to be 11% (132 subjects) and 33.3% (44 patients) among them also had asthma. Overcrowding (aOR = 6.4), absence of cross-ventilation (aOR = 2.5), occupational exposure to dust/ smoke (aOR = 2.1), tobacco smoking (aOR = 2.1), family history of allergic diseases (aOR = 2.7) and clinical allergy (aOR = 10.2) were found to be independent risk factors associated with Rhinitis.

CONCLUSION

Authors found that most common type was persistent and clinical findings was itching eyes and running nose.

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