Original Research Article

A study of clinical features and factors associated with allergic rhinitis at tertiary care centre

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Abstract

Background: Allergic Rhinitis is one of the commonest atopic diseases with greater morbidity and significant social and economic burden. Some of the key action statements of the 2015 clinical practice guideline of AAO-HNS focused on improving accurate clinical diagnosis of AR and avoiding unnecessary allergy testing and sinonasal imaging. **Objectives:** To study the clinical profile and factors associated with allergic rhinitis. **Material and Methods:** A cross sectional study done on total of 100 cases presenting to OPD of ENT department during a period of 1 year were selected randomly who fulfilled inclusion criterias. Detailed history was taken and appropriate investigations were done. Data was analyzed using Microsoft excel. **Results:** Most of the cases 38% of AR belonged to 21-30 age group. Next most common age groups were 31-40 with 25% cases and 11-20 age group with 12% cases. Excessive sneezing100% was most common symptom seen in this study. Most common sign seen was rhinorrhea with 93% cases, next common was cobble stonning seen in 78% cases. Most common allergen identifies was dust in 78% cases, cold in 42% and pepper in 28% cases. Moderate/sever persistent type was seen most frequently in study group with 35% cases, mild persistent type seen in 24% cases.72% cases showed seasonal variation while rest 28% showed perennial variation. **Conclusions:** Seasonal variations with male dominance in younger group was seen in this study. Patients presented late in the disease. Identification of allergen and appropriate treatment might reduce morbidity in patients with AR.

Key Word: allergic rhinitis.

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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 and nasal congestion.[1,2] Allergic rhinitis is characterized by symptoms such as congestion, rhinorrhea, sneezing, itching, nasal obstruction etc. It is also associated with fatigue, headache, cognitive impairment and sleep disturbance.[3,6] AR represents a global health problem. It is an extremely common disease worldwide, affecting 10 to 25% of the population.[7-9] However, this figure probably underestimates the prevalence of the disease, as many patients do not recognize rhinitis as a disease and therefore, do not consult a physician.[11] An increasing prevalence of AR over the last decades has been recognized.[12,13] WHO in collaboration with ARIA (Allergic rhinitis and its impact on asthma) has classified allergic rhinitis as seasonal and perennial seasonal allergy with is linked to pollen allergy and perennial allergy is linked to house dustmites. ARIA has also classified allergic rhinitis on the basis of duration and severity of symptoms as Intermittent and Persistent. Intermittent AR has symptoms that occur for four or less days per week or for not more than four consecutive weeks and Persistent AR lasts for more than four days per week and for more 5 than four consecutive weeks.[14] Since

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the gravity of allergies huge and there are less data available in this study area so, the present study was therefore conducted with the aim to identify the clinical profile of the patients with AR and to find the factors associated with AR.

MATERIAL AND METHODS

This was a cross sectional prospective clinical study conducted on 100 patients with a clinical diagnosis of allergic rhinitis during a period of 1 year in the Department of otorhinolaryngology, Department of ENT, Vardhmaan Institute of Medical Sciences, Pawapuri, Nalanda, Bihar. Written inform consent was taken before the start of the study. Detailed personal and clinical history was taken with the help of predesigned proforma. Appropriate laboratory and investigative work up was done. Patients who fulfilled the inclusion criteria were selected. Data was entered and analyzed using Microsoft excel. This study was approved by institutional ethics committee. The cases were divided into categories like "mild intermittent", "moderate/severe intermittent", "mild persistent" and "moderate/severe persistent" groups as per ARIA guidelines.[14,15]

RESULTS

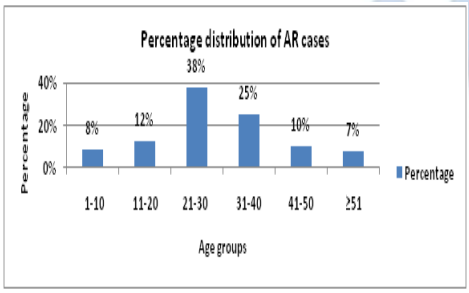

Figure 1: Distribution as per age groups

Most of the cases 38% of AR belonged to 21-30 age group. Next most common age groups were 31-40 with 25% cases and 11-20 age group with 12% cases.

Table 1: Profile of AR cases as per most common symptoms

Symptoms*	Total	Percentage
Excessive Sneezing	100	100%
Rhinorrhea	92	93%
Nasal Congestion / Blockage	88	88%
Itching	80	80%
Hyposmia	70	70%
Post Nasal Drip	48	48%
Mouth breathing	30	30%
Headache	28	28%
Throat hawking	21	21%
Recurrent sorethroat	15	15%
Facial aches	12	12%
Eye redness	12	12%
Feeling of FB in the throat	10	10%
Hearing loss	10	10%

*Multiple responses

Excessive sneezing100% was most common symptom seen in this study, was present in all cases. Rhinorrhea was seen in 92% cases and nasal blockage was seen in 88% cases.

Table 2: Profile of AR cases as per most common signs at 1st visit

Signs*	Total	Percentage
Rhinorrhea	93	93%
Cobble stonning	78	78%
Inf. Turbinate enlargement	68	68%
Post nasal drip	40	40%
Polyp	15	15%
Enlarged tonsills	8	8%
Tympanic membrane disorders	6	6%

*Multiple responses

Most common sign seen was rhinorrhea with 93% cases, next common was cobble stonning seen in 78% cases.

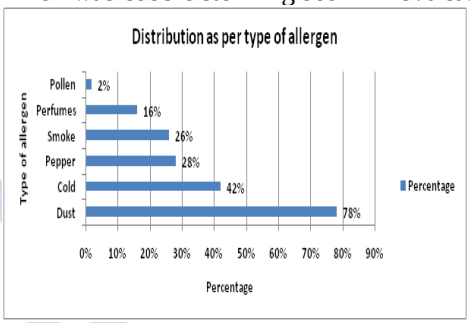

Figure 2: Distribution of cases as per type of allergen

Most common allergen identifies was dust in 78% cases, cold in 42% and pepper in 28% cases.

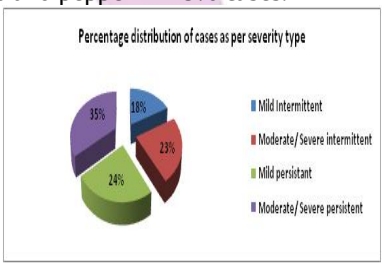

Figure 3: Percentage distribution of cases as per severity type

Mild intermittent type was seen most frequently in study group with 35% cases, mild persistent type seen in 24% cases.

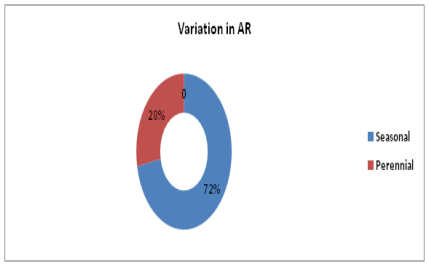

Diagram 4: Distribution of cases as per variation in AR presentation

72% cases showed seasonal variation while rest 28% showed perennial variation.

DISCUSSION

In present study the age of the patient ranged from 6 to 63 years, with a mean age of 26.1. Kanato T *et al*[16] also reported mean age of 28.3 years. Similar was reported by Desalu OO *et al*[17], Ibekwe PU *et al*[18] and Dahilo Ea[19]. The proportion of males was a bit higher than that of females 55% vs. 45% in this study. Similar was reported by Dahilo Ea[19] with 52% male and 48% females in their study. Yadav SP *et al*[20] opines that the male preponderance was possibly due to work place related allergens and stress. On the contrary Deb A *et al*[21] reported higher female percentage which may be just an accidental finding. In present study most of the cases 38% of AR belonged to 21-30 age group. Next most common age groups were 31-40 with 25% cases. Kanato T *et al*[16]also reportedage group of 21to 30 years as most (37%) age group. Dahilo Ea[19]studies also reported 21-30 age group as most common in their study with 33% cases. Deb A *et al*[21]study concluded 33.3% cases belonged to 30–39 years age group followed by 30.5% in 20–29 years age group. Desalu OO etal[17], Yadav SP *et al*[20] and Mgbor NC *et al*[22]. all these studies findings were in accordance with our study. Excessive sneezing was seen in 100% cases similar was reported by Dahilo Ea[19]. Rhinohrea was seen in 93% cases similar results were seen in Iseh KR *et al*[23], Fasunla AJ *et al*[24] and Mainasara MG *et al*[25] studies. Cobble stoning seen in 75% cases in Dahilo Ea[19]while in this study it was seen in 78% cases. Dust was most common allergen in present study seen in 78% cases. This was inconsistence with Dahilo Ea[19]and Yadav SPetal[20] findings. In present study moderate/severe persistent type of disease was seen most commonly with 35% cases. Mild persistent type was seen in 18% cases only, this might be due to the fact that more patients presented to hospital when the severity of the disease had increased. Similar was reported by Deb A *et al*[21]with 32% cases presenting with moderate/severe persistent type of disease. AlyasinS *et al*[26] also reported (58.3%) cases with moderate/severe persistent type of disease. Both these studies were supporting our findings. In present study 72% cases showed seasonal variation while rest 28% showed perennial variation. Similar was seen in Kanato T *et al*[16]study, with seasonal allergic rhinitis seen in 64% and 34% showed perennial allergic rhinitis. Dahilo Ea[19]study also showed seasonal variation in majority (52%), Yadav SP *et al*[20] also concluded the same, all these findings were in accordance with our results.

CONCLUSION

Unfavorably Allergic rhinitis is one of the commonest immunologic illnesses experienced by human. In our investigation we observed the illness to be common in more youthful age group and male dominance. Cases were more in winter in light of dry and dusty in these seasons. Most commonly presented with sneezing and rhinorrhea. Identifying allergen and its avoidance along with appropriate treatment might reduce AR prevalence and morbidity.

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