

Original Research Article

## A Profile Study of Allergic Rhinitis at Tertiary Care Centre

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**Abstract:** A prospective study, of clinical profile of 64 patients of allergic rhinitis, majority, under 10 years of age, is reported. Patients, at first reports, generally, have acquired co-morbidities, needing surgical intervention. The disease appears to have very early onset, even in infancy. Less than, half of the cases, have family history of similar symptoms. Serious health and developmental consequences of the condition, in children, are well characterized. The findings of study, emphasize, serious need for clinical monitoring, for early diagnosis and medical care, to prevent such sequelae of allergic rhinitis in pediatric patients.

**Keywords:** allergic rhinitis, nasal block, adenotonsillitis.

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**INTRODUCTION**

Allergic rhinitis affects, 10 to 40% population world over [1] and associates co-morbidities, imposing major health care costs [2]. Major sleep disturbance due to allergic rhinitis, leads to fatigue, irritability, lack of concentration, learning impairment, developmental delays and compromise of school performance in affected child [3-6]. Sniffing, sneezing, coughing and noisy breathing, cause social aversion and isolation, degrading quality of life. Associated co-morbidities, as adenoiditis, tonsillitis, sinusitis and otitis media, are highly health erosive in children [3]. Worse, is the lack of general cognizance, of allergic rhinitis symptoms, as disease, which delays timely seeking of medical care and increases prevalence of co-morbidities [7]. In present study, regional profile of allergic rhinitis, associated with, co-morbidity, treatment and outcome was appraised, toward generating clinical evidence base, for improved practice.

**PATIENTS AND METHOD**

It is descriptive study, of cases, during Nov 2009 to Sept 2010, based at the otorhinolaryngology department of BJ Medical College Ahmedabad. It is essentially, observational and informed written consent of prospective suitable patients were obtained, with assurance of not revealing their personal identities at any stage. Patients bearing two or more clinical symptoms, as, excess sneezing, watery running of nose, nasal congestion and block, itching in nose, itching and watering of eyes, etc, were included, as allergic rhinitis patients. Those, receiving previous nasal steroids and

any history of allergy, to commonly prescribed antibiotics, were excluded. Patients, bearing additional allergic rhinitis linked co-morbidities i.e. adenotonsillitis, hypertrophied turbinates, otitis media, sinusitis, nasal polyp, etc, were included.

In all, 64 patients could be included for study, 39 females and 25 males, with ages between 1 year and 49 years (Median age 17 years). Demographic information, age, gender, occupation were recorded. Nasal and ocular symptoms, age of onset of complaints, any recognition of triggering factors and family history of disease in parents and siblings, were elaborated. Co-morbidities, associating allergic rhinitis, were examined and quality of life summarily assessed, as, subjective degree of disturbance to sleep and daily life activities. Nasal mucosa scraping was taken, from surface of middle third of inferior turbinate with wooden rhino probe and eosinophilic/basophilic infiltration was inspected, to objective ascertaining of allergic rhinitis [8, 9]. It can be graded on 0 to 4 scale [10]. Eosinophilic/basophilic score of 1, was essential cutoff, for diagnosing allergic rhinitis.

Cases without co-morbidity were conservatively managed, with nasal fluticasone and oral cetirizine treatment. For co-morbidities, appropriate surgical care was rendered. Patients were observed, over length of hospital stay and at 30 days after discharge, in outdoor follow up visit.

**OBSERVATIONS AND RESULT**

Age wise, around 40% (25) cases were preschool age and 39 (over 60%) were under 10 year age group. Patients, in next sequential decades of age were, 7 (11%), 9 (14%), 5 (8%) and 4 (6%). The onset of symptoms of allergic rhinitis was found to be, as

early, as 6 month of age. Median age of onset was 3 years.

Profile of exhibited symptoms is shown in table 1.

**Table 1: Symptoms of allergic rhinitis**

S. No	SYMPTOM	PATIENTS (n)	%AGE
1.	Nasal blockage	48	75
2.	Running nose	38	59
3.	Recurrent sneezing	35	55
4.	Nasal itching	30	47
5.	Eye itching/watering	24	37.5

Over 40% (26) patients recognized, dust exposure and 21 (39%) recognized, cold weather, as triggers for aggravated symptoms. There was no particular occupational vulnerability to the symptoms. Positive family history, of similar trouble, in parent/sibling, was elicited in 27 (42%) of cases. Fifty (78%) patients complained of sleep disturbance and 58

(91%) believed, their normal daily activities had suffered.

Vast majority of 60 (94%) patients had co-morbidities, associated with allergic rhinitis, as elaborated in table 2.

**Table 2: Co-morbidities, associated with allergic rhinitis**

S. No	CO-MORBIDITY	PATIENTS (n)	%AGE
1.	Recurrent tonsillitis	31	48.4
2.	Adenoid hypertrophy	29	45.3
3.	Inferior turbinate hypertrophy	23	36
4.	Nasal polyp	6	9.4
5.	Ear discharge	6	9.4
6.	Sinusitis	3	5

35 patients were admitted for surgical interventions viz. Tonsillectomy, 24 (37.5%); adenoidectomy, 18 (28%); polypectomy, 2 (3%); and turbinectomy, 2 (3%). Remaining 29 (45%) patients were conservatively managed. Overall, hospital stay of admitted cases, for surgery, ranged between 2 days to 22 days, with median of 3 days.

**DISCUSSION AND CONCLUSION**

Amongst, the proposed causes for increase in incidence of allergic rhinitis, are climate factors, dietary transition, pollution etc. The condition is defined as allergen induced inflammation of nasal mucosa and adjoining tissue, that causes, sneezing, rhinorrhea, conjunctivitis, itching in nose, palate, throat and ear [11]. Nasal obstruction leads to sleep disturbance and profoundly affects quality of life, general and mental health, learning behavior and attention [12]. Nasal obstruction may be consequent to adenoid hypertrophy, nasal congestion, hypertrophy of inferior turbinate or polyp in most cases.

Allergic rhinitis symptoms appear, also, begin at very early age and add on co-morbidities. Very large

proportion of patients report, aggravated symptoms on exposure to dust. House dust is known to be ridden with mites, moulds, insects and animal dander. In the study sample, family history did exist in around 40% of cases. Vast majority had sleep disturbance, due to nasal blockage. Both adenoid hypertrophy and inferior turbinate enlargement were largely responsible for nasal block. Co-morbidities were accompanied as a rule in the patients. Most common indications for surgical interventions, were, adenoid hypertrophy, recurrent tonsillitis, inferior turbinate hypertrophy, nasal polyp and sinusitis.

This study depicts, profile of allergic rhinitis cases in the region and apprise for due practice for prevention of co-morbidities and abatement of compromise in quality of life and development of the vastly pediatric sufferers of allergic rhinitis.

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