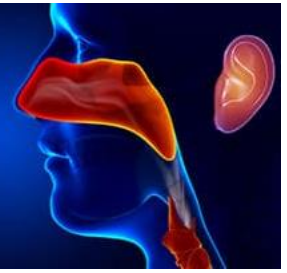


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Clinical manifestations of allergic rhinitis patients

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Abstract

Introduction: Allergic Rhinitis (AR) is an inflammation of the nasal mucosa mediated by Immunoglobulin E (IgE) after exposure to allergen. The inflammatory reaction manifests as runny nose, nasal congestion, sneezing, and nasal itching. The clinical manifestation recurs after each exposure to the initiating allergen. In Indonesia alone, the prevalence of allergic rhinitis reaches 40% of children, 10-30% of adults, the age is often found at the age of 15-30 years. We have never reported data on allergic rhinitis patients at Sebelas Maret University Hospital, Surakarta, so the authors are interested in conducting research on the clinical manifestations of allergic rhinitis patients when they first come for treatment.

Methods: This study was conducted in clinic of the Department of Otorhinolaryngology-Head and Neck Surgery Sebelas Maret University Hospital and used a descriptive research design. The study was conducted from Januari to Juli 2021.

Results and Discussions: From 67 patients, numbers of male and female in The subjects' general characteristics were mostly women (55%) with the highest range of age in the 18-34 age group (37.3%), followed by 35-49 age group (29.9%). A majority of the subjects were school/college students (32.8%) and private employee (29.9%).

Conclusion: In this study, the most sufferers were moderate to severe persistent allergic rhinitis, namely 53 people (79.1%), followed by mild intermittent 14 people (20.9%). Allergic shiner is the result of inspection of the most common signs of allergy on the face found in this study (83.5%), while allergic creases were only found in 2 respondents (3%). The most common symptoms are: nasal obstruction of 58 people (86.5%), followed by rhinorrhea with 52 people (77.6%). Most of the study subjects present with comorbidity (100%) with rhinosinusitis as the highest frequency (55.2%).

Keywords: Allergic rinitis, manifestation of allergic rinitis

Introduction

After exposure to allergens, immunoglobulin E (IgE) mediates allergic rhinitis (AR), which is inflammation of the nasal mucosa. A runny nose, stuffy nose, sneezing and an itchy nose are symptoms of an inflammatory response. Every time the triggering allergen is found, the clinical symptoms reappear. Currently, 5-50% of people worldwide suffer from allergic rhinitis, which is a global health problem. It is known that the incidence of allergic rhinitis in adults in Europe ranges from 17% to 28.5%. In addition, new research shows that the prevalence of allergic rhinitis has increased, especially in countries where prevalence rates were previously low. In Indonesia alone, 40% of children and 10% to 30% of adults suffer from allergic rhinitis, and this condition most often attacks those aged between 15 and 30 years^[1,2]

From WHO data in 2000 regarding the epidemiology of allergic rhinitis in North America and Western Europe, there has been an increase in the prevalence of allergic rhinitis from 13-16% to 23-28% in the last 10 years. The prevalence of allergic rhinitis in school-aged children in Western Europe has doubled. The prevalence of seasonal and perennial allergic rhinitis in the USA has increased to 14.2%, highest at ages 18-34 years and 35-49 years^[3].

In a study at Sadikin Hospital in Bandung, results were obtained from 167 allergy cases, a percentage of 52.7% of sufferers aged 18-34 years and 53.3% working as students. Another study stated that in Palembang in 1999 there were 259 Allergic Rhinitis sufferers, 122 men and 137 women. Epidemiological data on RA in Indonesia based on research from several educational centers showed prevalence rates varying between 1.14%-23.34%^[8]. Quantitative diagnostic criteria in the form of a scoring system for the diagnosis of allergic rhinitis is the Score for Allergic Rhinitis (SFAR) questionnaire.

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To collect relevant data for allergic rhinitis studies, this scoring system was also designed to divide cases based on their diversity, including the type of allergen that triggers the condition, season, and other factors [3].

We have never reported data on allergic rhinitis patients at Sebelas Maret University Hospital, Surakarta, so the author is interested in conducting research on the clinical manifestations of allergic rhinitis patients when they first come for treatment.

Method

The scope of this research is Ear Nose Throat Head and Neck Surgery (ENT-HNS). This research was conducted at the ENT-HNS polyclinic, Sebelas Maret University Hospital. This research is descriptive type with a cross sectional design. The research sample was allergic rhinitis patients at Sebelas Maret University Hospital who met the following criteria: 1) Inclusion Criteria Age \leq 60 years, allergic rhinitis patients seeking treatment for the first time, willing to take part in the study. 2) Exclusion Criteria Sufferers of nasal tumors, history of rhinoplasty, currently in a state of acute infection. The sampling technique in this research was sequential (consecutive sampling). The type of data used is primary data including name, age, gender, symptoms of allergic rhinitis, clinical manifestations, questionnaire scores on allergic rhinitis. Data Collection Process: Looking for research samples, namely allergic rhinitis patients seeking treatment at Sebelas Maret University Hospital, explaining the research procedures to be carried out as well as providing informed consent, carrying out an anterior rhinoscopic nasal examination, classifying allergic rhinitis based on complaints, using the Score Questionnaire on allergic rhinitis, classifying manifestations clinical course of allergic rhinitis

Results and Discussion

Table 1: Subject General Characteristic

Variable	n	AR Patients	%
Gender			
Female	37		55
Male	30		45
Age, range			
\leq 17 years old	7		10, 4
18 - 34	25		37, 3
35 - 49	20		29, 9
50 - 60	15		22, 4

From 67 patients, numbers of male and female in The subjects' general characteristics were mostly women (55%) with the highest range of age in the 18-34 age group (37.3%), followed by 35-49 age group (29.9%) (Table 1).

Table 2: Characteristics of Respondents Based on Occupation

Occupation	n	%
Civil Servant	17	25, 3
Private Employee	20	29, 9
Student/College Student	22	32, 8
House Wife	8	12
Others	0	0

A majority of the subjects were school/college students (32.8%) and private employee (29.9%)

Table 3: Characteristics of respondents who having allergic rhinitis

Variable	n	AR Patients	%
Classification			
Intermittent	14		20, 9
Persistent	53		79, 1
Nature of symptoms			
Mild Intermittent	14		20,9
Moderate Severe Persistent	53		79, 1
Sign Allergic			
<i>Allergic Shiners</i>	56		83, 5
<i>Allergic Crease</i>	2		3
<i>Allergic Salute</i>	0		0
Score For Allergic Rhinitis			
\geq 7	67		100
$<$ 7	0		0
Clinical Manifestations			
Nasal Obstruction	58		86, 5
Nasal Itch	36		53, 7
Rhinorrhea	52		77, 6
Sneezing	25		37, 3

Rinosinusitis was most prevalent comorbidity with the frequency 52,2% (Table 2). The least prevalence comorbidity was dermatitis atrophy (5%) and nasal polip (3%).

Discussion

This high prevalence among women is thought to be caused by hormonal differences between the two sexes, where estrogen is known to have anti-inflammatory properties, thereby triggering

Atopy [4].

The occupational distribution is also similar, with the highest being school students (32.8%) and the second largest private sector workers (29.9%). Allergic rhinitis is known to attack school-aged children and cause learning disabilities [1].

Subjects were mostly aged 18-34 years (37.3%) and the trend decreased with age. Previous research shows a decrease in atopy with increasing age, it is thought that this phenomenon is caused by a decrease in the concentration of allergen-specific IgE [5].

In this study, the majority of sufferers were moderate to severe persistent allergic rhinitis, namely 53 people (79.1%), followed by intermittent mild allergic rhinitis 14 people (20.9%). The results of this study are consistent with the findings of Moeis [8] and Alexandropoulos [9]. They found that the majority of patients consistently had moderate to severe levels of persistent severity.

Symptoms of allergies include swollen eyelids, blocked conjunctiva, and dark circles under the eyes, which are caused by limited blood flow in the area due to allergic mediators in the nose. An indication of the presence of transverse lines on the nose (called allergic creases) is the patient continuously rubbing nose (known as allergic salute) [10].

In this study, the most common symptoms were found, namely: nasal congestion in 58 people (86.5%), followed by rhinorrhea in 52 people (77.6%). According to Cruz *et al* reported that the epithelium is unable to compensate for water loss due to CDA in the nasal mucosa, thus causing clinical effects. The release of arachidonic acid metabolites, especially 15-hydroxy-icosatetraenoid, in epithelial cells due

to hypertonic stimulation activates sensory nerve endings and causes symptoms [6].

A study in Spain conducted by Colas *et al.* [7]. Found that sneezing was the main symptom in allergic rhinitis without sleep disorders, while nasal congestion, runny nose and itchy nose were the main symptoms in people with sleep disorders.

Most subjects had comorbidities (100%) and rhinosinusitis (55.2%). This is in accordance with previous research which found that rhinosinusitis was the most common comorbidity in allergic rhinitis patients. The presence of comorbidities can influence treatment results, because most comorbidities have the same pathophysiology as allergic rhinitis [11].

Conclusion

This research is preliminary research which is the basis for the development of further research in the field of Health Sciences Ear Nose Throat Head and Neck Surgery, especially in allergic rhinitis patients, in particular the Sub-Allergy Immunology at UNS Hospital with the hope that the treatment management algorithm is appropriate and provides clinical improvement in both signs and symptoms of rhinitis patients. Allergy.

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References

1. Bousquet J, Khaltayev N, Cruz AA, Denburg J, Fokkens WJ, Togias A, *et al.* Allergic rhinitis and its impact on asthma (ARIA) 2008. *Allergy*; c2008, 63.
2. World Health Organization, Allergen. ARIA (Allergic Rhinitis and its Impact on Asthma) report 2008. AllerGen NCE Inc; c2008.
3. Ologe FE, Adebola SO, Dunmade AD, Adeniji KA, Oyejola BA. Symptom Score For Allergic Rhinitis. *American Academy of Otolaryngology-Head and Neck Surgery*; c2012, 148(4).
4. Osman M, Hansell AL, Simpson CR, Hollowell J, Helms PJ. Gender-specific presentations for asthma, allergic rhinitis, and eczema in primary care. *Prim Care Respir J.* 2007;16(1):28-35.
5. Scichilone N, Callari A, Augugliaro G, Marchese M, Togias A, Bellia V. The impact of age on prevalence of positive skin prick tests and specific IgE tests. *Respir Med.* 2011;105(5):651-8.
6. Cruz AA, Naclerio RM, Proud D, Togias A. Epithelial shedding is associated with nasal reaction to cold, dry air. *J Allergy Clin Immunol.* 2006;117:1351-81.
7. Colás C, Galera H, Añibarro B, Soler R, Navarro A, Jáuregui I, *et al.* Disease severity impairs sleep quality in allergic rhinitis (The SOMNIAAR study). *Clin Exp Allergy.* 2012;42(7):1080-*et al*7.
8. Moeis RM, Sudiro M, Herdiningrat RS. Allergic rhinitis patient characteristics in Dr. Hasan Sadikin General Hospital Bandung Indonesia. *Althea Med J.* 2014;1(2):70-4.
9. Alexandropoulos T, Haidich AB, Pilalas D, Dardavessis T, Daniilidis M, Arvanitidou M. Characteristics of patients with allergic rhinitis in an outpatient clinic: A retrospective study. *Allergol Immunopathol (Madr).* 2013;41(3):194-200.
10. Brunet C, Bedard P, Lavoie A, Jobin M, Hébert J. Allergic rhinitis to ragweed pollen. Modulation of histamine-releasing factor production by specific immunotherapy. *J Allergy Clin Immunol.* 1992;89:87-94.
11. Aziza A, Dermawan A, Dewi VYK. Effectiveness of Allergic Rhinitis Management Related to WHO Guideline on Allergic Rhinitis and Its Impact on Asthma (ARIA). *Althea Medical Journal*; c2016, 3(4).

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