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ORIGINAL ARTICLE

Clinical profile of Patients with Allergic Rhinitis- A Retrospective Study

Manoj Kumar Mishra

Assistant Professor, Department of ENT, Mayo Institute of Medical Science Barabanki, U.P., India

***ABSTRACT*:**

Background: Allergic rhinitis is a type of inflammation in the nose which occurs when the immune system overreacts to allergens in the air. The present study was aimed at determining the cases of allergic rhinitis. **Materials & Methods:** The present retrospective study was conducted on 224 patients of both genders. General information such as name, age, gender etc was noted. The case history and general physical examination was performed. **Results:** Out of 224 patients, males were 110 and females were 114. The difference was non-significant (P-1). Age group 10-20 years had 17 males and 18 females. Age group 20-30 years had maximum patients (males- 33, females- 35) followed by 30-40 years (males- 26, females- 28), 40-50 years (males- 20, females- 21), 50-60 years (males- 12, females- 8) and 60-70 years (males- 2, females- 4). The difference was non- significant (P- 0.1). Common radiographic findings were haziness seen in maxillary sinus (60), frontal sinus (65), ethmoid sinus (48) and sphenoid sinus (37). Opacification was seen most commonly in ethmoid sinus (75) followed by maxillary sinus (52), sphenoid sinus (37) and frontal sinus (8). Mucosal thickening was observed in 140 maxillary sinuses and 11 frontal and 2 ethmod sinus. The difference was significant (P- 0.04). The most common symptoms in patients were sneezing (224) followed by rhino rhea (220), congestion (196), itching (190), post nasal drip (125), snoring/ mouth breathing (110), throat hawking (45), sore throat (20), eye redness (19) and headache (28). The difference was significant (P- 0.01). The common clinical findings in patients were rhinorrhea (220), cobble stoning (191), inferior turbinate engorgement (156), polyps (35), post nasal discharge (82), tonsillomegally (22) and dull TM (11). The difference was significant (P- 0.01). The common triggers were dust (112) followed by perfumes (68), cold environment (65), smoke (60), pollen (12), gloves (7), pepper (5) and grass (4). The difference was significant (P-0.01). **Conclusion:** Allergic rhinitis is commonly seen in second decade. Common symptoms are sneezing, rhino rhea, congestion. Common trigger factors are dust, smoke and cold.

Key words: Allergic rhinitis, Frontal sinus, Opacification

Corresponding author: Dr. Manoj Kumar Mishra, Assistant Professor, Department of ENT, Mayo Institute of Medical Science Barabanki, U.P., India

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INTRODUCTION

Allergic rhinitis, also known as hay fever, is a type of inflammation in the nose which occurs when the immune system overreacts to allergens in the air. Signs and symptoms include a runny or stuffy nose, sneezing, red, itchy, and watery eyes, and swelling around the eyes. The fluid from the nose is usually clear. Symptom onset is often within minutes following exposure and they can affect sleep, the ability to work, and the ability to concentrate at school. Those whose symptoms are due to pollen typically develop symptoms during specific times of the year. Many people with allergic rhinitis also have asthma, allergic conjunctivitis, or atopic dermatitis.[1]

Allergic rhinitis is typically triggered by environmental allergens such as pollen, pet hair, dust, or mold. Inherited genetics and environmental exposures contribute to the development of allergies. Growing up on a farm and having multiple siblings decreases the risk. The underlying mechanism involves IgE antibodies attaching to the allergen and causing the release of inflammatory chemicals such as histamine from mast cells.[2] Diagnosis is usually based on a medical history in combination with a skin prick test or blood tests for allergen-specific IgE antibodies. These tests, however, are sometimes falsely positive. The symptoms of allergies resemble those of the common cold; however, they often last for more than two weeks and typically do not include a fever.[3]

It may be associated with otitis media with effusion, eustachian tube dysfunction, nasal polyps and adenoid hypertrophy. These associated conditions confer additional morbidity on patients, thereby impairing their quality of life. Allergic rhinitis is the type of allergy that affects the greatest number of people. In Western countries, between 10–30% of people are affected in a given year. It is most common between the ages of twenty and forty.[4] The present study was aimed at determining the cases of allergic rhinitis.

MATERIALS & METHODS

The present retrospective study was conducted in the department of ENT. It included 224 patients of both gender. All were informed regarding the study and written consent was obtained. Ethical clearance was taken from institutional ethical committee. General information such as name, age, gender etc was noted. The case history and general physical examination was performed. Results were tabulated and subjected to statistical analysis using chi- square test. P value < 0.05 was considered significant.

RESULTS

Table I Distribution of patients

Total- 224		
Male	**Female**	**P value**
110	114	1

Table I shows that out of 224 patients, males were 110 and females were 114. The difference was non- significant (P-1).

Table II Age & Gender wise distribution of patients

Age group	Males	Females	P value
10-20	17	18	
20-30	33	35	
30-40	26	28	0.1
40-50	20	21	
50-60	12	8	
60-70	2	4	
Total	110	114	

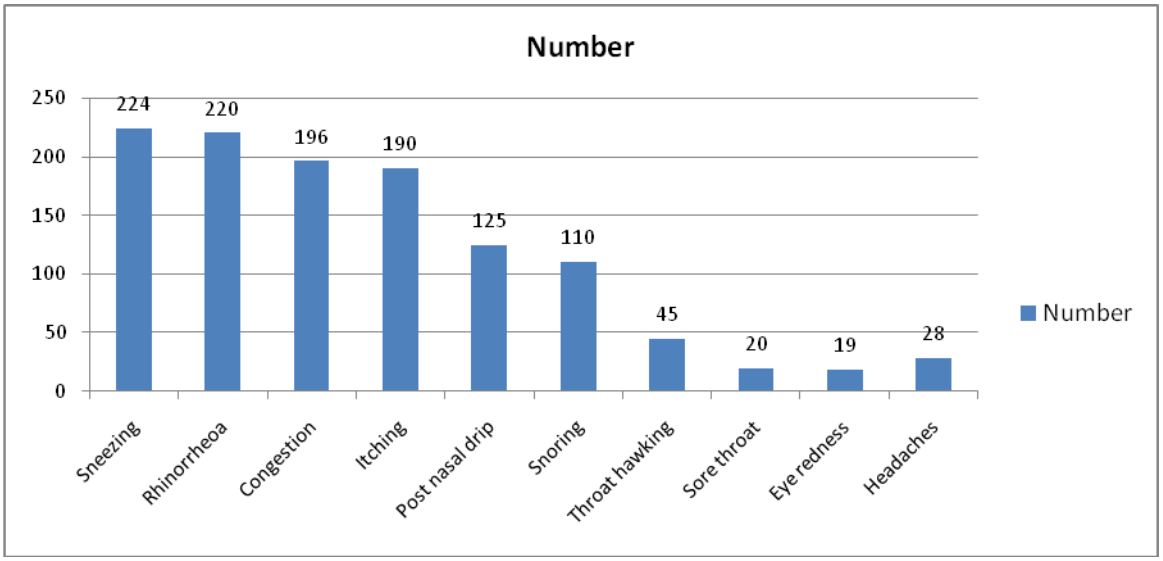
Table II shows that age group 10-20 years had 17 males and 18 females. Age group 20-30 years had maximum patients (males- 33, females- 35) followed by 30-40 years (males- 26, females- 28), 40-50 years (males- 20, females- 21), 50-60 years (males- 12, females- 8) and 60-70 years (males- 2, females- 4). The difference was non- significant (P- 0.1).

Table III Radiographic findings

Findings	Maxillary	Frontal	Ethmoid	Sphenoid
Haziness	60	65	48	37
Opacification	52	8	75	28
Mucosal thickening	140	11	2	-

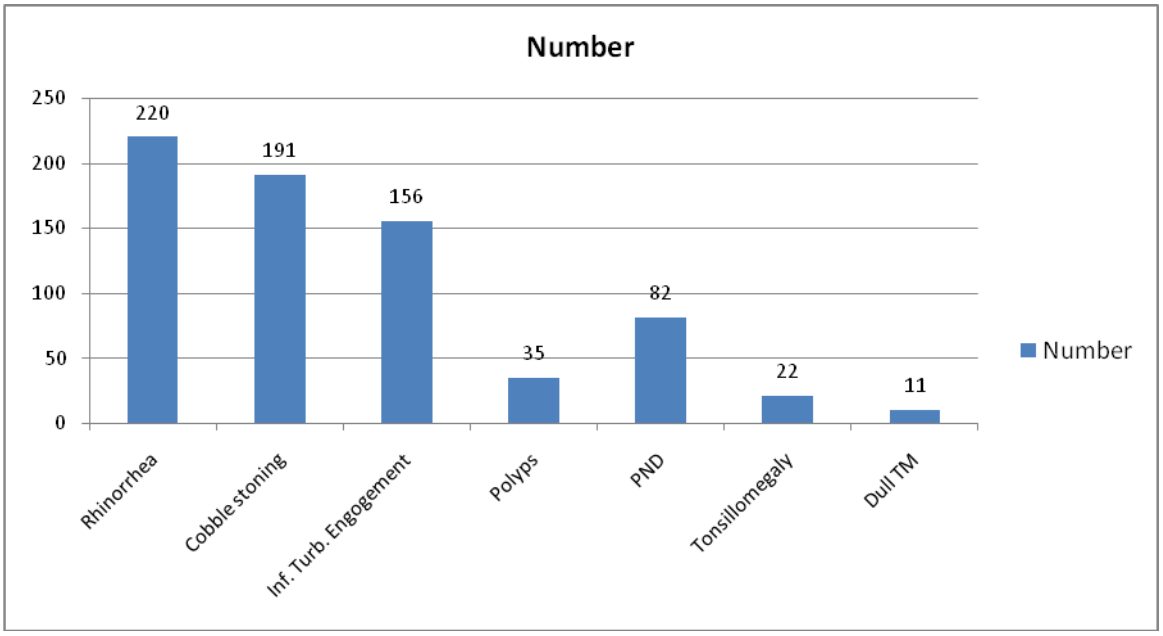
Table III shows that common radiographic findings were haziness seen in maxillary sinus (60), frontal sinus (65), ethmoid sinus (48) and sphenoid sinus (37). Opacification was seen most commonly in ethmoid sinus (75) followed by maxillary sinus (52), sphenoid sinus (37) and frontal sinus (8). Mucosal thickening was observed in 140 maxillary sinuses and 11 frontal and 2 ethmod sinus. The difference was significant (P- 0.04).

Graph I Symptoms in patients



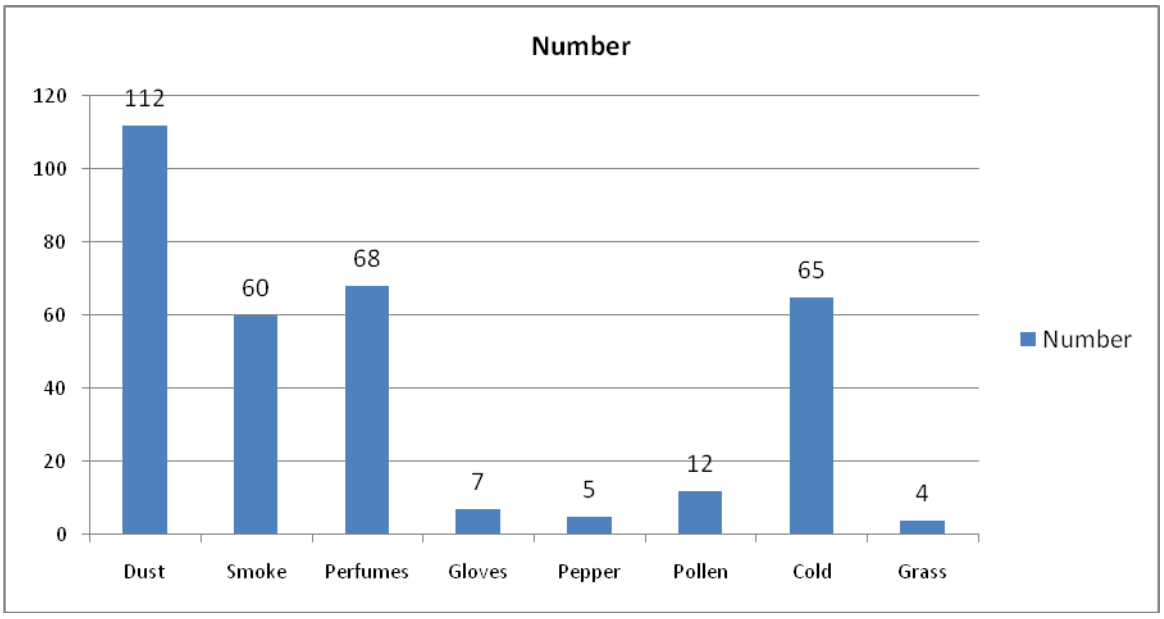
Graph I shows that most common symptoms in patients were sneezing (224) followed by rhino rhea (220), congestion (196), itching (190), post nasal drip (125), snoring/ mouth breathing (110), throat hawking (45), sore throat (20), eye redness (19) and headache (28). The difference was significant (P- 0.01).

Graph II Clinical findings in patients



Graph II shows that common clinical findings in patients were rhinorrhea (220), cobble stoning (191), inferior turbinate engorgement (156), polyps (35), post nasal discharge (82), tonsillomegally (22) and dull TM (11). The difference was significant (P- 0.01).

Graph III Identified triggers in patients



Graph III shows that common triggers were dust (112) followed by perfumes (68), cold environment (65), smoke (60), pollen (12), gloves (7), pepper (5) and grass (4). The difference was significant (P- 0.01).

DISCUSSION

Allergic rhinitis triggered by the pollens of specific seasonal plants is commonly known as "hay fever", because it is most prevalent during haying season. However, it is possible to have allergic rhinitis throughout the year. The pollen that causes hay fever varies between individuals and from region to region; in general, the tiny, hardly visible pollens of wind-pollinated plants are the predominant cause.[5]

Allergy testing may reveal the specific allergens to which an individual is sensitive. Skin testing is the most common method of allergy testing. This may include a patch test to determine if a particular substance is causing the rhinitis, or an intradermal, scratch, or other test. Less commonly, the suspected allergen is dissolved and dropped onto the lower eyelid as a means of testing for allergies. This test should be done only by a physician, since it can be harmful if done improperly. In some individuals not able to undergo skin test, the RAST blood test may be helpful in determining specific allergen sensitivity. Peripheral eosinophilia can be seen in differential leukocyte count.[6]

In this study we included 224 patients of both gender. We found that age group 20-30 years had maximum patients (males- 33, females- 35) followed by 30-40 year, 40-50 years and 50-60 years age group. This is similar to Ashok et al.[7]

We observed that common triggers were dust followed by perfumes, cold environment and smoke. This is in agreement with Kreiner et al[8] who found pollen and smoke as most common etiological factors in their study.

We found that common clinical findings in patients were rhinorrhea, cobble stoning, inferior turbinate engorgement, polyps, post nasal discharge, tonsillomegally and dull TM. This is similar to results of study by Shin H.[9] We found that most common symptoms in patients were sneezing, rhino rhea, congestion, itching, post nasal drip, snoring/ mouth breathin, throat hawkins, sore throat, eye redness and headache. This is similar to Kisrstreesakul.[10]

Common radiographic findings were haziness seen in maxillary sinus, frontal sinus, ethmoid sinus and sphenoid sinus. Opacification and mucosal thickening was also observed in our patients.

CONCLUSION

Author concluded that allergic rhinitis is commonly seen in second decade. Common symptoms are sneezing, rhino rhea, congestion. Common trigger factors are dust, smoke and cold.

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