CLINICAL PROFILE OF PATIENTS WITH ALLERGIC RHINITIS

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ABSTRACT

Objective: To find out the allergic symptoms of patients who presented to otorhinolaryngology clinic.

Methods: Two hundred and fifteen patients of either sex and above the age of sixteen years who presented to otorhinolaryngology clinic suffering from allergic rhinitis were involved in the study. History of rhinorrhea, sneezing, nasal obstruction, nasal itching, epistaxis, nasal dryness and conjunctival symptoms which are generally the chief symptoms of allergic rhinitis in addition to family history of bronchial asthma and other allergies were recorded. Physical clues to allergic rhinitis were boggy, pale, or "bluish" nasal turbinates, rhinorrhea, allergic salute and allergic shiners.

Results: The commonest complaint was rhinorrhea seen in 96% of cases followed by sneezing (88%), nasal obstruction (80%), nasal itching (55%), epistaxis (17%), nasal dryness (14%) and conjunctival symptoms (12%). Pale and hypertrophied boggy turbinates were seen in 97% of cases, allergic salute in 4% and allergic shiners in 13% of cases. In 7% of cases, the patients had mild bronchial allergy manifested by dyspnea, cough and wheezes during the attack. Positive family history of allergy was found in 25% of patients.

Conclusion: Allergic rhinitis is a common medical condition characterized by rhinorrhea, sneezing and nasal obstruction as chief symptoms. The diagnosis rests mainly on a classic clinical picture.

Key words: Allergic rhinitis, Allergic profile, Rhinorrhea.

JRMS August 2007; 14(2):10-12

Introduction

Allergic rhinitis is a symptomatic disorder of the nose induced by inflammation mediated by immunoglobulin E (IgE) in the membrane lining of the nose after allergen exposure.[1]

It is characterized by nasal, throat, and ocular itching; rhinorrhea; sneezing; nasal congestion; and, less frequently, cough.[2] Allergic rhinitis, like other allergic conditions, is on the increase around the world.[3] Popularity arose for atmospheric pollution as a cause for the rising prevalence of this disease.[4-6] However, the most likely explanation for rising prevalence is the 'hygiene hypothesis'.[7] This theory states that, as a result of a reduction in natural infections in young children due to improvement of public health and hygiene, earlier use of antibiotics, smaller family sizes and urbanized living, the infectious trigger of the immune system to produce TH1 lymphocytes is absent and the immune system swings into a TH2 lymphocyte dominated system producing the cytokines characteristic of allergic diseases.

Allergic rhinitis is largely a clinical diagnosis. However, a high index of suspicion needs to be borne in mind as many patients and parents do not complain of the direct symptoms of this disease and the differential diagnosis is extensive and includes infectious rhinitis, non-allergic rhinitis with eosinophilia syndrome (NARES), occupational rhinitis, mechanical

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Manuscript received April 29, 2006. Accepted July 20, 2007

obstruction, vasomotor rhinitis, drug-induced rhinitis, and nasal polyps.[6,7]

More importantly are the indirect features as a result of ongoing nasal congestion, a hangdog or tired facial expression, characteristic mouth breathing, allergic shiners or dark rings beneath the eyes, nasal crease and a watery nasal discharge. Allergy testing in the form of laboratory testing or prick skin testing needs to be sought in a cost effective way and extensive testing is very seldom required to make a diagnosis of allergic rhinitis.

The present hospital based study was undertaken to find out the symptoms of allergic rhinitis of patients who presented to otorhinolaryngology clinic.

Methods

The sample of this study was conducted in the period between March 2005 and April 2006, in Otorhinolaryngology division at Princess Haya Al-Hussein hospital in Aqaba and Prince Zaid Ben Al-Hussein in Al-Tafileh (south of Jordan).

Two hundred and fifteen patients of either sex and above the age of sixteen years who presented to the otorhinolaryngology clinic suffering from allergic rhinitis were involved in the study.

All patients underwent a detailed history taking and a thorough general examination; systemic examination and examination of the nose, throat and ears with special emphasis on history of rhinorrhea, sneezing, nasal obstruction, nasal itching, epistaxis, nasal dryness and conjunctival symptoms which are generally the chief symptoms of allergic rhinitis. Family history of bronchial asthma, atopic dermatitis and conjunctivitis in addition to allergic rhinitis were also recorded.

In our study, the physical clues to allergic rhinitis which was recorded by two physicians in the above mentioned hospitals included boggy, pale, or "bluish" nasal turbinates, with watery discharge on nasal speculum exam. Although uncommon, patients may also have a nasal crease on the external nose caused by repeated rubbing or itching (the so-called "allergic salute"). Chronic nasal congestion may also precipitate darkening of the skin under the eyes or "allergic shiners."

Results

Majority of the patients were females (59%) while males accounted for 41% of cases and presented in their twenties and their thirties. Over a period of one year, the majority of cases presented during the months of November and April. The incidence of allergic rhinitis was found to be 1.9% of all the patients attending the otorhinolaryngology clinic over this period.

The commonest complaint was rhinorrhea seen in 96% of cases followed by sneezing (88%), nasal obstruction (80%), nasal itching (55%), epistaxis (17%), nasal dryness (14%) and conjunctival symptoms (12%). Pale and hypertrophied boggy turbinates were seen in 97% of cases, allergic salute in 4% and allergic shiners in 13% of the cases. In 7% of cases, the patient had mild bronchial allergy manifested by cough, dyspnea and scattered wheezes. This was based on history and physical examination without performing pulmonary function tests.

Positive family history of allergic rhinitis, bronchial asthma, atopic dermatitis and conjunctivitis was found in 25% of patients.

The factors which caused or aggravated the symptoms of allergic rhinitis are shown in Table I. House dust was found to be the most common (38%). These factors were identified from history only.

Table I. Predisposing factors observed in allergic rhinitis

Factor	Percentage
House dust	38
Air pollen	32
Grass pollen	10
Smoke	7
Chemicals	6
Cosmetics	4
Cold drinks	3

Discussion

Although often perceived as trivial or "inconvenient", allergic rhinitis is a major chronic respiratory disease by virtue of its high prevalence and significant effect on quality of life, work or school performance, and productivity.[8,9]

Establishing a reliable estimate of the prevalence of allergic rhinitis is difficult; prevalence estimates range from as low as 4% to more than 40%. Epidemiological studies suggest the prevalence of allergic rhinitis in the United States and around the world is increasing. The cause of this increase is unknown; however, contributing factors may include higher concentrations of airborne pollution, rising dust mite populations, less ventilation in homes and offices, dietary factors, and the trend toward more sedentary lifestyles.[6] However, the incidence of allergic rhinitis in this study was found to be 1.9% and this may be due to the limitations posed by the sampling technique used in the study. This was a hospital based survey and the true incidence is possibly higher.

For people with allergic rhinitis, quality of life can be considerably reduced, leading to impaired performance of daily activities, cognitive function and classroom productivity, and reduced psychosocial well-being.[11,12,13]

In present study, the majority of cases of allergic rhinitis were noticed in the younger age group mostly in second and third decades of life. Females were

predominantly affected compared to males. This was possibly due to a higher percentage of females who attend our clinics. Similar observations were seen in other studies[14].

Making a correct diagnosis is always the first step in the management of allergic rhinitis. This is particularly true for a disease with a high prevalence. History and physical examination findings greatly assist in the evaluation of contributing factors and in sorting through the differential diagnosis.

In present study, regarding the diagnostic symptoms of allergic rhinitis, rhinorrhea was the commonest presenting symptom seen in 96% of cases followed by sneezing (88%), nasal obstruction (80%), nasal itching (55%), epistaxis (17%), nasal dryness (14%) and conjunctival symptoms (12%). Similar distribution of symptoms was noticed in other studies.[14]

Aguilar *et al.* [14] reported epistaxis as a current symptom of allergic rhinitis in 23.7% of the cases. In this study, epistaxis was recorded in 17% of the cases.

In our study, we also noticed that the majority of cases presented during November and April. Possible reasons for this presentation may be due to the presence of dusty weather in south of Jordan during these months or due to grass or flower pollens during April which is the beginning of spring season.

Some patients with allergic rhinitis and no clinical evidence of asthma exhibit bronchial hyper-responsiveness and close association between allergic rhinitis and asthma has been demonstrated by several studies.[15,16] In the present study, mild bronchial allergy manifested by dyspnea, cough and wheezes during the attack was seen in 7% of cases. Family history has been shown to be a risk factor for the development of allergic rhinitis.[17] Min *et al.* studying allergic rhinitis and allergy associated disorders among Korean patients found that 40.2% of allergic rhinitis subjects had family history of the same disease.[3] Also Khanna *et al.* reported a positive family history of atopy in 88% of Indian patients with allergic rhinitis.[18] However, in our study positive family history of allergy was found in only 25% of patients.

Conclusion

Allergic rhinitis is a common medical condition characterized by rhinorrhea, sneezing, nasal obstruction, nasal itching, epistaxis, nasal dryness and conjunctival symptoms; the diagnosis rests mainly on a classic clinical picture.

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