



A STUDY OF CLINICAL PRESENTATIONS DUE TO ALLERGENS In ENT:

ENT

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ABSTRACT

The nomenclature of allergy, hypersensitivity and intolerance is very often confused and is still controversial. Different terms are used in the United States and Europe. The European/WHO terminology is taken as standard. The most common classification of allergy is IgE mediated and non-IgE mediated. The IgE mediated is also termed as type 1 hypersensitivity and others are divided into type 2, type 3 and type 4. Mucosal epithelial cells which line the upper respiratory passage are affected by the acute allergic reactions. The interactions that take place between the allergens and the surface are complex and involves the autonomic nervous system and the mediators produced by the underlying tissues in response to allergens. Mucous glands which have goblet cells in the epithelium are induced to secrete mucus and the mucus genes are induced in the ciliated epithelium. This causes mucous metaplasia and hyperplasia. Thus, repeated and prolonged exposure leads to structural changes and enhanced mucus production. The tissues will be washed with cytokines and other inflammatory mediators which causes classical pictures of asthma. A sincere effort has been made to find out the common allergens that cause the respiratory complications in the practice of ENT. This study is intended to help the fellow ENT practitioners to identify the commonly associated allergens and thus take immediate actions in diagnosing and treating the patient that present in complications in OPD.

KEYWORDS

Allergens, Respiratory complications, ENT, Mucosal Epithelium.

Introduction:

Mucosal epithelial cells which line the upper respiratory passage are affected by the acute allergic reactions. The interactions that take place between the allergens and the surface are complex and involve the autonomic nervous system and the mediators produced by the underlying tissues in response to allergens. Mucous glands which have goblet cells in the epithelium are induced to secrete mucus and the mucus genes are induced in the ciliated epithelium. This caused mucous metaplasia and hyperplasia. Thus, repeated and prolonged exposure leads to structural changes and enhanced mucous production. The tissues will be washed with cytokines and other inflammatory mediators which cause classical pictures of asthma. Structural abnormalities that are commonly encountered in the practice of ENT are sinusitis and nasal polyps. The sinusitis is caused by prolonged inflammation of the mucosa and thus excess production of the mucus and this leads to the obstruction of the natural drainage. Nasal polyp is oedematous and hypertrophied mucosal and submucosal tissue presenting as a mass lesion. A sincere effort has been made to find out the common allergens that cause the respiratory complications in the practice of ENT. This study is intended to help the fellow ENT practitioners to identify the commonly associated allergens and thus take immediate actions in diagnosing and treating the patient that present in complications in OPD. This study is intended to help the fellow ENT practitioners to identify the commonly associated clinical symptoms due to allergens and thus take immediate actions in diagnosing and treating the patient that present in complications in OPD.

Aims and Objectives:

To study age distribution of disease and to study the most common respiratory conditions due to allergy.

Materials and Methods:

This study was conducted in the Department of ENT, Travancore Medical College, Kollam, The study was conducted from 2012 to 2014. 180 cases were studied in the Department of ENT. Mean age of the study population was 26.11 years with a standard deviation of 11.739. The patients were selected on the basis of respiratory complications that they presented in the OPD.

Results:

Table 1: Mean age of the Patients

Patients	Mean age	Standard Deviation
180	26.11	11.739

Table 2: Total Number of Patients who developed complications

Patients	Rhinitis	Rhinitis with sinusitis	Rhinitis with polyp
180	111	57	18

Table 3: Table of Significance

Patients (Rhinitis)	X-Value	P-Value (<0.05)
111	0.787	0.032

This is significant.

Discussion:

The nomenclature of allergy, hypersensitivity and intolerance is very often confused and is still controversial. Different terms are used in the United States and Europe. The European/WHO terminology is taken as standard.¹ The most common classification of allergy is IgE mediated and non-IgE mediated. The IgE mediated is also termed as type 1 hypersensitivity and others are divided into type 2, type 3 and type 4.² Mucosal epithelial cells which line the upper respiratory passage are affected by the acute allergic reactions. The interactions that take place between the allergens and the surface are complex and involves the autonomic nervous system and the mediators produced by the underlying tissues in response to allergens.³ Mucous glands which have goblet cells in the epithelium are induced to secrete mucus and the mucus genes are induced in the ciliated epithelium. This causes mucous metaplasia and hyperplasia.⁴ Thus, repeated and prolonged exposure leads to structural changes and enhanced mucus production. The tissues will be washed with cytokines and other inflammatory mediators which causes classical pictures of asthma.⁵

No two individuals have the same allergy patterns nor susceptible to same allergens in the same manner. The study of inheritance suggests a multigenic pattern. But many of the genes in the humans have evolved based on the environmental factors.⁷ Some substances are more likely to cause an allergic response than the other allergens. The allergens are mostly proteins in nature. It has not been proved that possibly what proteins or what protein structure causes the allergic reactions. There have been papers published proving the fact that other factors associated with the initial exposure to the protein do influence the type of response. An adjuvant is thus present which always alters the immune response. In some mouse models, aluminium hydroxide increases the anaphylactic antibody production.⁸ In humans repeated doses of alum – conjugated allergen extracts are used to suppress IgE mediated allergy.⁹

Conclusion:

Being in a country like ours where people carry out different customs and are exposed to a plethora of allergens, it is the need of the hour to

identify the allergen and properly deal within the local environment.

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