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Role of Sr. IgE in *Tamak shwas* w. s. r. to bronchial asthma

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ABSTRACT:

Purpose: Asthma is a multi-factorial and complex disease in which allergic factors and non-allergic triggers interact and result in bronchial obstruction and inflammation. Allergenic sensitization is important in the development of asthma. In ancient science allergic factors are also mentioned as Hetus of Tamak shwas. Immunoglobulin E (IgE) is central to the induction of allergic diseases through its binding to the high-affinity receptor (Fc epsilon R1) on mast cells and basophils.

Method: The method for study include review of literature from ancient Indian Ayurvedic, modern, scientific and researched based publications, texts and journals.

Result: Role of serum IgE in tamak shwas w.s.r. to bronchial asthma.

Conclusions: If serum IgE levels are raised we can diagnose as patient is suffering from tamak shwas (bronchial asthma allergic type)

KEYWORD: Bronchial asthma, tamak shwas, Sr. IgE, allergy

INTRODUCTION:

Tamak shwas is described in Ayurvedic texts. It is a pranavaha strotas vikara. The feature of this disease is very similar to the disease 'Bronchial Asthma' mentioned in modern science.¹ Asthma is a lung disease that inflames and narrows the airways. In today's stressful and modern urbanised life style, increase in environment pollution, population are some of the factors that increase cases of Asthma. The symptoms may vary from individual to individual and depends on environmental factors. A person may show regular symptoms of the disease or periodic symptoms that may prompt at a certain time. The most common signs of asthma that can help diagnose the disease are breathlessness or short breath while

talking, laughing, or running, chest pain or tightness, sleep apnea or trouble while sleeping caused by breathlessness, Coughing or wheezing (whistling sound from chest while sleeping or lying down), cold and flu due to viral infection.²

Antibodies are made by the immune system to protect the body from bacteria, viruses, and allergens. IgE antibodies are normally found in small amounts in the blood, but higher amounts can be found when the body overreacts to allergens.

AIMS AND OBJECTIVES:

- To study role of serum IgE in tamak shwas w.s.r.t. bronchial asthma.

MATERIALS AND METHODS:

Tamak Shwas: Tamak means darkness. During the attack patient feels dark, black in front of his eyes, he can't see anything and becomes breathless.³ Acharya charak has described hetus of tamak shwas as ;

“रजसा धूमवाताभ्यां शीतस्थानाम्बुसेवनात्।

व्यायामात् ग्राम्यधर्माध्वरक्षान्नविषमाशनात्॥ “⁴

- Exposure to substances such as pollen, dust, animal fur, sand, and bacteria, which triggers allergic reactions.

- Viral Infection like cold and flu, or pneumonia, Air Pollution, smoke, fumes from vehicles, etc.
- Stress and anxiety.
- Physical activity or exercise induced asthma.
- Medications like aspirin, Ibuprofen, beta-blockers, etc.
- Acid reflux or gastroesophageal reflux disease (GERD).
- Perfumes and fragrances.
- Weather, especially extreme changes in temperature.
- Food additives.

Samprapti of Tamak shwas:

Due to increased Kaph dosha, strotorodh in Pranvaha Strotas (blockage in the respiratory systems), natural direction of the Vat is blocked and blocked Vatdosh is reversely directed (Pratilom Vayu). Due to Vat dosha dryness is increased and natural lubrication is disturbed hence causes the difficulty in breathing. Breathing becomes stressful, effort full, noisy, rate of respiration is increased and patient feels difficulty in natural process of breathing.

According to modern medicine bronchial asthma is a chronic, inflammatory disease of the respiratory tract, which is characterized by bronchial hyper reactivity and respiratory obstruction.

Types of bronchial asthma:

1. Allergic (extrinsic)
2. Nonallergic (intrinsic) asthma

As it said that asthma and allergy go hand in hand, evaluation of serum IgE is important in bronchial asthma.

Serum IgE:

A strong association between total serum Immunoglobulin E (IgE) level and asthma phenotype was found in previous studies. An immunoglobulin E (IgE) test measures the level of IgE, a type of antibody. Immunoglobulin E (IgE) are antibodies produced by the immune system. If you have an allergy, your immune system overreacts to an allergen by producing antibodies called Immunoglobulin E (IgE).⁵ These antibodies travel to cells that release chemicals, causing an allergic reaction.

Serum IgE levels:

Variations in the upper limit of normal total serum IgE have been reported: they can range from 150 to 1,000 UI/ml; but the usually accepted upper limit is between 150 and 300 UI/ml.⁶ People who have elevated IgE levels can have environmental or food allergies. If you get a blood test and it shows that you have an elevated IgE that could mean

you are an allergic patient. Having allergic asthma means allergens trigger your asthma symptoms. Allergens cause an allergic reaction because your immune system thinks they are harmful. Your immune system responds by releasing a substance called immunoglobulin E (or IgE).⁷

RESULT:

If we found that Serum IgE levels are raised in patients with symptoms like breathlessness, coughing then we can say that patient is suffering from bronchial(allergic) asthma.

DISCUSSION:

There are so many factors which are responsible for inducing asthmatic attacks. The substances which causes allergic reactions are called allergens. When these allergens reacts, on first exposure to the specific allergen the atopic patients mounts a predominantly IgE and blood test of such patients show elevated serum IgE levels.

CONCLUSION:

Serum Immunoglobulin E levels are high in asthmatics as compared to normal subjects. On an average, the levels increased as the severity of asthma increased. So if we to come know asthma is allergic by elevated serum IgE

levels, we can further go for specific allergens tests. Thus we can prevent asthmatic attacks by avoiding such allergens. In Ayurveda also Acharyas have mentioned “Nidanparivarjan” as the first line of treatment.

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