

ALLERGIC RHINITIS

ALLERGIC RHINITIS INDICATES A HYPERSENSITIVITY REACTION TO AN otherwise innocuous foreign material that results in harm to the host.

It involves a specific hypersensitivity reaction known as a Type 1 reaction that involves mast cells releasing histamines and other chemical mediators that bring about a physical reaction.

This mast cell release would have to involve antibodies of a specific type - immunoglobulin E.

Mast cells are concentrated in our bodies in the lining of the nose, lining of eyes (the conjunctiva), the skin covering the body and the lining of the airway bringing air to the lungs – the trachea & bronchi.

As the nose is the first organ that comes into contact with air-borne allergens, there is local mast cell mediated reaction here.

This gives rise to inflammation of the lining of the nose and upper airway. There is sneezing, nasal congestion and running nose & an itchy nose.

There is also an itchy sore throat with postnasal drip.

The conjunctiva of the eyes also reacts to air-borne allergens with red itchy and watery eyes.

A person never reacts on first exposure to an allergen like pollen or a bee sting.

It would require prior exposure to the allergen for sensitization to occur and it involves formation of Ig E specific to the allergen. This may involve several repeated exposures to the offending allergen before enough Ig E is present to give a significant reaction.

Aero-allergy from inhaled aerosolized allergens is responsible for allergic rhinitis.

It is rarely ever that you get a reaction of allergic rhinitis from food ingested.

The health impact of allergic rhinitis is significant. Up to 40 % of populations in industrialized Asian nations complain of it. The most common age group with allergic rhinitis was in the 10-30 years. In adults-allergic rhinitis is more common in women, & in children it's more common in boys.

To diagnose aero-allergy in a patient - there is a history of cause and effect seen. As when with exposure to the cat allergen there is effect like sneezing, running nose and eyes and itch. This may take about 3-6 months to 2 years of prior exposure and sensitization before it manifests.

Itch is characteristic of histamines release from mast cells and is characteristic of type 1 reaction.

The skin prick test is used most commonly in the diagnosis of allergy. It's reliable, sensitive & reproducible & painless. It's also cheap to do as compared to more expensive blood studies.

Studies done of allergen skin prick test, has shown the most common allergen giving allergic rhinitis to be the house dust mite.

Irritants like industrial pollution, car exhaust fumes, indoor pollution from cigarette smoke & air-conditioning have a potentiating role in bringing on a reaction.

The prevalence of allergic rhinitis seems to be on the rise. Whether this trend is due to greater exposure to indoor allergens, more urban living & more air pollution (the haze), or greater awareness of allergic disease or better data collection - we do not know for sure.

Evidence based treatment for allergic rhinitis recommends firstly, patient education & allergen avoidance whenever it is indicated.

Secondly for mild intermittent cases of allergic rhinitis oral and local non-sedative anti-histamine tablets is used, with intra-nasal decongestant (for less than 10 days) or an oral decongestant.

For moderate severe intermittent symptoms an intranasal steroid spray can be also added.

For mild persistent cases and severe persistent cases with all the prior mentioned measures of patient's education, allergen avoidance, pharmacotherapy, the option of immunotherapy is considered.

Basically immunotherapy is done by exposing the patient to minute amounts of the allergen to which he is reacting to like pollen or dust mite. With this prolonged minute exposure there is suppression of the allergic response at the cellular level in the human body with concomitant suppression of the inflammatory mediators released by mast cells.

In the past this was achieved by the use of injections given subcutaneously. More recently an alternate route of administration, has been noted to be effective.

This is by administering below the tongue (sublingually), without any injections.

Sublingual immunotherapy administration has been proven to be as effective as subcutaneous injection method.

Sublingual immunotherapy was shown to be effective in improving rhinitis and conjunctivitis symptoms, which was induced by pollen or mite allergens. There was also improvement in asthma control in adults and children, & a decrease in the use of the most widely prescribed anti-allergic medications.

It also showed an optimal safety profile in children and adults and was the preferred therapy by children and parents compared to subcutaneous injection immunotherapy. ■

