

## ***Editorial***

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### **Nasal allergy**

#### **About allergy!**

The word “allergy” means an altered reactivity of the body to otherwise harmless environmental substances. When a person expose to an allergen, the interaction between IgE and allergen results in the manifestation of allergic symptoms. Everybody has experience of allergy in any form. The incidence is increasing day by day globally. Although, it is a trivial condition, the financial loss incur is very high. It also affects the quality of life and productivity having impacts on economy<sup>1</sup>.

#### **Allergens are:**

- Inhaled (house dust mite, pollens, moulds, fungi, animals dander)
- Eaten (egg white, milk, nuts, shrimps, fish, meat, wheat or rice)
- Injected (bee stings or drugs as aspirin, NSAIDs)
- Vehicle exhaust
- Latex
- Or they can come into contact with the skin or eyes (dust, pollens, animal dander, and moulds).

#### **Allergy in many different forms:**

1. Allergic rhinitis – an inflammation of the mucous membranes of the nose resulting in exposure to an inhaled allergic agent. Common symptoms include itchy nose, bouts of sneezing, runny nose and nasal obstruction.
2. Asthma – an inflammation of the lower airways presenting with difficult to

breathe. Key symptoms include coughing, shortness of breath, wheezing and tightness of chest.

3. Atopic dermatitis – sometimes called “the itch that rashes”, atopic dermatitis is a red inflamed rash most often seen on the arms, legs, ankles or neck. Atopic dermatitis often starts in the first year of life. Between 80 and 90% of children who have atopic dermatitis show signs before the age of seven.
4. Conjunctivitis – an inflammation of the whites of the eyes and the inner eyelid surfaces. It manifests as redness, tearing, stinging and watery discharge from the eyes.
5. Food allergy – several food items like egg white, milk, peanuts, shrimps, wheat and rice are capable of including allergy in select patients. It manifests as itching of the throat, vomiting, abdominal pain and diarrhea.
6. Occupational allergy – allergy that is caused by exposure to a product in the workplace. It can affect many target organs like the lungs, nose, eyes and skin. Certain metals and latex are among the allergens that can cause occupational allergy.
7. Anaphylaxis – a life threatening allergic reaction, usually presents as a medical emergency manifesting as obstruction of the upper airways, difficulty in breathing, wheezing and sudden fall in blood pressure (shock). Bee venom and penicillin can cause anaphylaxis<sup>2</sup>.

**Allergic rhinitis:**

1. It occurs when an allergen (an allergy-producing substance, such as house dust mite or pollen) causes the body to defend itself by producing antibodies. Allergic rhinitis is an inflammation of the membranes of the nose.
2. When the allergen and the antibody combine, the body response by releasing certain chemical substance like histamine, leukotrienes and prostaglandins in the nose.
3. As a result, you may experience nasal symptoms like sneezing, congestion, itchy and runny nose, and watery eyes.

**Common co-morbidities of allergic rhinitis:**

**Asthma:** Asthma and allergic often co-exist, as one airway one disease.

**Otitis media:** Ear diseases that occurs due to inflammation and swelling of the Eustachian tubes that connect the inside of the nose. The earliest signs are usually ear fullness and pain. It is more common in children and recurrences may be preventive by adequate treatment of rhinitis.

**Sinusitis:** Inflammation of the sinuses occurs due to viral, bacterial or allergic triggers. Common symptoms comprise pain in the forehead, teeth or face, coughing and thick, dark yellow or greenish nasal discharge. Sinusitis is often associated with asthma.

**Nasal polyp:** Allergic rhinitis may be associated with nasal polyps.

**Aspirin hypersensitivity:** Allergic patients may have aspirin hypersensitivity. So, one should be careful to have aspirin or NSAIDs who has allergy<sup>3</sup>.

**Links between allergic rhinitis and asthma:**

Allergic rhinitis is strongly associated with asthma. 70-80% of patients with asthma also have allergic rhinitis. This relation is seen in

both persistent and seasonal allergic rhinitis. Many potential mechanisms may link allergic rhinitis and asthma. These conditions share several common mediators such as cysteinyl leukotrienes released by mast cells when the allergen and the antibody combine. This process occurs in both upper and lower airways. As a result, you may experience nasal symptoms like sneezing, congestion, itchy and runny nose, and watery eyes, and simultaneous asthmatic symptoms like cough and wheezing.

Allergic rhinitis also worsens asthmatic symptoms. Some patients with asthma may not improve breathing despite adequate treatment for asthma. Among these patients, if strong nasal symptoms coexist, treatment for allergic rhinitis may improve asthma symptoms as well as nasal symptoms<sup>4</sup>.

**Cure for allergy?**

As yet, there is no complete cure for allergies. However, allergies are treatable and to a large extent the symptoms can be controlled with currently available medications. Your doctor is the best persons to advise you on ways to make your life more manageable and thus improve your quality of life.

**Recommendations on rhinitis by the World Health Organization – ARIA initiative:**

Based on the evidence of the impact of rhinitis on asthma and their frequent co existence, the World Health Organization has recently developed a new set of recommendations on rhinitis, the WHO – ARIA (Allergic Rhinitis and its Impact on Asthma) Initiative which are guidelines that aim to broaden the perspective for prevention of bronchial asthma through the appropriate management of allergic rhinitis<sup>1,5</sup>.

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