



A Review On Allergic Rhinitis And Its Homoeopathic Management

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Abstract:

Allergic rhinitis is a common and underappreciated condition in today's world. It is an IgE mediated immune response of nasal mucosa to certain allergens. It is characterized by symptoms such as nasal congestion, sneezing, rhinorrhea and nasal itching and maybe accompanied by symptoms of allergic conjunctivitis. Allergic rhinitis is responsible for impaired quality of life of patients and subsequent economic burden as well. This article provides a brief review of allergic rhinitis along with its homoeopathic management.

Keywords: allergic rhinitis, homoeopathy, homoeopathic management

Abbreviations:

AR: Allergic Rhinitis

ARIA: Allergic Rhinitis and its Impact on Asthma

GRADE: grading of recommendations assessment, development and evaluation

ASA: acetylsalicylic acid

NSAID: non-steroidal anti-inflammatory drugs

ACE: angiotensin-converting enzyme

IgE : immunoglobulin E

CBC: complete blood count

CT : computed tomography

RAST: Radioallergosorbent test

Introduction:

Definition:

Allergic rhinitis (AR) is an inflammatory disorder of nasal mucosa which is characterized by sneezing, nasal congestion, rhinorrhea and nasal itching and is caused due to IgE - mediated immune response of nasal mucosa to airborne allergens^[1,2,3]

Epidemiology:

According to estimates from the Global Burden of Disease 2015, it has been found that a significant number of people, roughly 400 million worldwide are affected by AR. Globally, its prevalence has increased, especially in low- and middle-income nations. The prevalence of (AR) in Asian countries ranges from 5% to 45%.^[4] Although boys are more likely than girls to have allergic rhinitis, this tendency reverses in puberty so that, by adulthood, men and women are affected equally^[5] In children under 3 years old, the prevalence is 5%; in children aged 6-7 years old, it is 8.5%; in children aged 13-14, it is 14.6%; and in adults aged 20-44 years old, it ranges from 11.8% to 46%.^[6]

Predisposing factors:

Allergic rhinitis is included under atopic diseases. Atopy is an abnormal tendency to produce specific IgE in response to common, unharmed environmental allergens. High socioeconomic status, environmental pollution, birth during a pollen season, the absence of older siblings, late entry into nursery or preschool education (for example, at age 4 years and older), heavy maternal smoking during the first year of life, exposure to indoor allergens like animal dander and dust mites, high concentrations of IgE in the serum (>100 IU/mL before age 6 years), positive allergen skin prick tests, and early introduction to outdoor activities are additional risk factors for allergic rhinitis.^[1]

A study found that increased susceptibility to allergic rhinitis is strongly correlated with increased alcohol consumption, smoking (current, past, and passive smoking), higher daily computer usage (due to dust trapped on the computer and higher indoor allergens), and decreased sleep hours. Living a stressful life and having a history of depression in the mother (pre and post natal) are strongly associated with AR because these factors can cause the expression of cortisol, which then causes allergic reactions and ups the likelihood of AR. Cesarean births make children more vulnerable to AR because they don't expose them to the microflora in the mother's birth canal, which has a protective impact against AR. Children who grow up in clean environments are less likely to be exposed to these allergies, which is another risk factor. Atopy and allergy illness run in the family is a significant risk factor.^[7,8] The likelihood that the offspring will be impacted by allergic disease is 20% if one parent has it, and it increases to 47% if both parents have it.^[2]

Pathogenesis:

Inhaled allergens cause specific IgE antibodies to be produced in people with genetic predisposition. The Fc end of this antibody bonds to blood basophils or tissue mast cells. The antigen reacts with the Fab end of the IgE antibody when the person is subsequently exposed to the allergen, leading to the degranulation of mast cells and the release of a number of chemical mediators that result in allergic rhinitis symptoms. Depending on the kind of tissue involved, there may be vasodilation, mucosal oedema, eosinophilic infiltration, and excessive nasal gland secretion.

Sneezing, nasal discharges, and nasal congestion are indications of an enhanced nasal reaction to normal stimuli.

There are two phases to it:

a. Acute or early phase:

Histamine and other vasoactive amines are released during the acute or early phase, which causes it to happen. It happens on its own between five and thirty minutes after being exposed to a particular allergen and causes symptoms like sneezing, nasal blockage, nasal discharges, and bronchospasm.

b. Late or delayed phase:

It is brought on by the infiltration of inflammatory cells at the site of antigen deposition, including eosinophils, neutrophils, basophils, monocytes, and CD4 + T cells. After being exposed to the allergen for 2 to 8 hours, it results in edema, congestion, and thick secretions.^[2]

Clinical features:

Nasal congestion, nasal irritation, rhinorrhea, and sneezing are typical symptoms of allergic rhinitis. Symptoms of allergic conjunctivitis such as redness, tears and itching of eyes are frequently associated with allergic rhinitis.^[8] Some people may get bronchospasm. The seasonal cycle may cause variation in the temporal and quantitative characteristics of symptoms.^[9]

Physical examination:

An evaluation of the skin, chest, posterior oropharynx, ears, nose, and sinuses should be performed.

Outward indications of allergic rhinitis may include chronic mouth breathing, rubbing at the nose or a visible transverse nasal crease, frequent sniffing or throat clearing, and allergic shiners (dark circles beneath the eyes brought on by nasal congestion).

Swelling of the nasal mucosa and pale, thin secretions are frequently seen when the nose is examined. To check for structural abnormalities such as septal deviation, nasal ulcerations, and nasal polyps, an internal endoscopic examination of the nose should also be taken into consideration.

The ears typically look normal; nonetheless, evaluation for Eustachian tube dysfunction with a pneumatic otoscope should be taken into consideration. Additionally, fluid beneath the ear drum can be evaluated using the Valsalva technique.

Sinuses should be palpated for tenderness.

The posterior oropharynx should be checked for symptoms of post nasal drip, the chest, skin, and other areas of the body should be thoroughly inspected for any indications of concurrent asthma (such as wheezing) or dermatitis.^[8]

Classification of Allergic Rhinitis:

Traditional classification:

1. Seasonal allergic rhinitis:

When seasonal antigens to which the person is sensitive are prevalent in the air during a certain season, symptoms appear. Hay fever, one of the most prevalent types of seasonal allergic rhinitis, is brought on by grass pollen and is most prevalent from May through July. Seasonal allergens includes the pollen from weeds, grasses and trees

2. Perennial allergic rhinitis:

Symptoms are persistent throughout the year. Perennial allergens include dust mites (which are found in beddings, mattresses, pillows and carpets), insect parts, animal danders and fibres. ^[2]

This classification fails globally because many regions of the world do not experience seasons, and even in those that do, many affected people experience both seasonal and permanent allergy sensitization.

ARIA classification:

I. Intermittent or persistent symptoms:

Intermittent : Symptoms persist for less than 4 days a week or less than 4 weeks per year.

Persistent : Symptoms persist for more than 4 days a week or more than 4 weeks per year.

II. Mild or moderate to severe symptoms:

Mild: Patient has normal sleep and there is no difficulty in performing daily activities, going to work and school and experience no trouble symptoms.

Moderate to severe: Patient experience troublesome symptoms, difficulty in sleep, performing daily activities, sports and leisure, work and school.^[1]

Diagnosis:

The history characterized by typical allergy symptoms is used to make the diagnosis of (AR). Peripheral eosinophilia is typically detected on the CBC. Eosinophils are also present in huge numbers in the nasal smear which should be performed when the symptoms are present. A skin-prick test typically reveals higher total serum IgE levels. In order to detect the allergen-specific IgE that has sensitized cutaneous mast cells, a skin test using the allergens intracutaneously, either by puncture or prick, is helpful. Radioallergosorbent test (RAST) is an in vitro test assesses the level of a particular IgE antibody in the patient's serum. Nasal provocation test can also be conducted in which the patient is requested to sniff into each nostril after an allergen is placed in a little amount on the end of a toothpick. Any allergy-related symptoms that manifest should be documented. ^[2,10] When there is a suspicion of a complication or to rule out tumors, tumors, or chronic rhinosinusitis, a CT scan (computerized tomography) is performed.^[11]

Differential diagnosis:

The differential diagnosis includes a number of nonallergic rhinitis types, including nonallergic chronic rhinosinusitis and a noninflammatory rhinopathy (also known as vasomotor rhinitis).^[12]

Impact on quality of life and economic burden

It has adverse effects on the social life of the patients. Productivity at work and performance in school is also affected in people because of missing school and work days. Children may struggle in school due to distraction, weariness, lack of sleep, or irritability, which can impede their capacity to learn. The use of suboptimal pharmaceutical treatments, particularly sedating antihistamines, significantly reduces academic achievement.^[1]

The quality of life is emphasized as a key factor in assessment and therapy according to the ARIA (Allergic Rhinitis and its Impact on Asthma) guideline. It offers a comprehensive, empirically supported, practical, step-by-step strategy for managing allergic rhinitis and has recently undergone updating and evaluation using the GRADE (grading of recommendations assessment, development, and evaluation) methodology.^[1]

Indirect costs of AR in adults include those related to lost productivity at work and sick days.^[13]

Complications:

It is important to recognize and treat moderate-to-severe rhinitis since it is associated with poor asthma management. People with chronic and severe rhinitis have a significant prevalence of asthma. Individuals with allergic rhinitis have additional difficulties with viral colds ^[1] Several associated issues such as allergic conjunctivitis, recurrent sinusitis, rhinosinusitis, nasal polyps, adenoid hypertrophy, hyposmia, Eustachian tube dysfunction, and serous otitis media, can be brought on by nasal allergies. Additionally, these people can have sleep apnea. Additionally, nasal allergies may affect a person's cognitive ability.^[14,15,16]

Management:

One guiding principle is to keep allergens away.^[1] To identify possible allergic rhinitis triggers, it is advised to assess the patient's living and working circumstances. The patient's environmental history should highlight any common or potentially relevant allergens they may be exposed to at home or at work, such as pollens, furred animals, textile flooring or upholstery, tobacco smoke, home humidity levels, and other potentially harmful compounds. Patients should be questioned regarding current or recent medication and drug use because the use of some medications (e.g., beta-blockers, acetylsalicylic acid [ASA], non-steroidal anti-inflammatory drugs [NSAIDs], angiotensin-converting enzyme [ACE] inhibitors, and hormone therapy) as well as cocaine recreationally can cause symptoms of rhinitis.^[8]

Conventional treatment:

Intranasal corticosteroids are used because of its anti-inflammatory effects. Currently, immunotherapy is accessible via sublingual and subcutaneous methods, mostly for people with allergic rhinitis who are unable to control their symptoms with medication and allergen avoidance. ^[1]

Homoeopathic management:^[17,18]

1. *Arsenicum album*:

Patient has frequent sneezing but without any relief. Nasal discharge is thin, watery and excoriating. Nose feels stopped up. Symptoms are worse in open air and better indoors. wheezing is present. There is difficulty in breathing which is worse in midnight and is accompanied by fear of suffocation and is unable to lie down.

2. *Aralia racemosa:*

Frequent Sneezing on least current of air with profuse watery and excoriating nasal discharge. Chest feels constricted as if a foreign body is present in throat with tickling sensation and gets worse in spring. Asthmatic complaints on lying down at night with spasmodic cough which is worse after first sleep.

3. *Arundo mauritanica:*

Symptoms begin with burning and itching of palate with conjunctiva. Sneezing with Intense annoying itching in the nostrils and roof of mouth. Sense of smell is lost with coryza.

4. *Pulsatilla paratensis:*

Itching and burning in eyes with thick, profuse, yellow, bland discharges. Right nostril stopped with pressing pain at the root of nose. Yellow, offensive mucus from nose which is abundant in morning. Nose stopped in evening. Thick, bland, offensive discharge from ears.

5. *Sabadilla:*

Spasmodic sneezing with copious, watery, nasal discharge. Coryza is accompanied by severe frontal pains and redness of eyes.

6. *Natrum muriaticum:*

Initial one to three days, there is violent, fluent coryza which changes into stoppage of nose making breathing difficult. Violent sneezing with thin, watery discharge like raw white of egg. Sense of taste and smell is lost. Nose feels dry and sore.

7. *Sulphur:*

Chronic, dry catarrh with stuffy nose which is worse indoors. There is difficulty in breathing and wants windows open. Dyspnea in middle of night which is ameliorated by sitting up. Patient experiences imaginary foul smell.

8. *Allium cepa:*

Extremely acrid, watery and profuse nasal discharge. Violent sneezing, especially on entering a warm room. Coryza is accompanied by headache, cough and hoarseness. There is redness of eyes with much burning and smarting lachrimation which is better in open air. Tickling in larynx with sensation as if it is split or torn.

9. *Naphthalinum:*

Sneezing with painful inflammation of eyes. Spasmodic asthma which is better in open air. Dyspnea and sighing inspiration.

10. *Silicea:*

Sneezing in the morning with itching at the point of nose. Dry, hard crust formation in nose which bleeds when loosened. Obstruction of nose with loss of smell. Nasal septum is perforated. Persistent and profuse muco purulent sputum.

Conclusion:

Allergic rhinitis is a very common ailment due to various environmental, genetic factors. But people doesn't pay much attention to its symptoms and often ignore taking treatment which leads to decreased quality of life of patients and various complications such as asthma, sinusitis, sleep apnea and others. To manage this condition, avoidance of allergen is mandatory. Homoeopathy aims to give a holistic treatment to the patients by providing individualized medicines on the basis of symptom similarity. Individualized homoeopathic medicines should be prescribed in such cases keeping in mind the modalities, causative factors, diathesis and susceptibility.

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