Allergic rhinitis and its homoeopathic therapeutics

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Abstract
Allergic Rhinitis is characterized by sneezing, rhinorrhea, obstruction of the nasal passages, itching in conjunctiva, nose, and pharynx; and lachrymation, all occurring in a temporal relationship to allergen exposure. Approximately 20% to 30% of total population suffers from at least one of these allergic diseases in India. Common conventional medicines include Anti-Histamines, Intra Nasal Steroids and Immunotherapy. But they have found to be having a suppressive action only. Allergen avoidance is the only measure advised by most of the conventional physicians which is practically difficult in everyday life. Conventional system of medicine has limited scope in treating AR. They only suppress the symptoms which may lead to relapse of allergy in a greater intensity. Homoeopathic medicines can be useful in treating chronic, recurrent allergic conditions without suppressing the symptoms. There is a better scope in Homoeopathy for the treatment of AR, since the treatment is based on Holistic and Individualistic approach.

Keywords: Allergic rhinitis, hay fever, homoeopathy, hypersensitivity

Introduction
Allergic Rhinitis (AR) is one of the most increasing disorders of today. The nasal allergy remains one of the difficult and partially solved problems in the branch of Rhinology. AR is an inflammatory condition of the nasal mucosa developed in response to various environmental changes and allergens. It is a hypersensitive immune response of the body to environmental factors which is induced by Immunoglobulin E (IgE) mediated inflammatory process. It is a clinical condition characterized by majorly four symptoms - rhinorrhea, sneezing, nasal itching and nasal congestion\[1\]. It is commonly associated with Conjunctivitis, Post Nasal Dripping and Sinusitis. If untreated, it may also result in sleep disturbances, fatigue, depressed mood and affects quality of life and productivity. Asthma is observed to co-exist frequently with AR which also suggests a relation between both the conditions of upper and lower respiratory tracts. Rhinitis can also be induced by Non-Allergic reasons like weather change, cold air etc. but many of them are clinically presented as Mixed Allergic Rhinitis having both Allergic and Non-Allergic reasons\[2\].

Epidemiology
World Allergy Organization states that over 400 million people suffer from AR around the world\[3\]. The burden of AR is enormous and constitutes 55% of all allergies. Around 20-30% of the Indian population suffers from AR and that 15% develop Asthma\[4\]. The burden of allergic diseases in India has been on an uprising trend in terms of prevalence as well as severity. Approximately 20% to 30% of total population suffers from at least one of these allergic diseases in India. Studies have reported that 20% to 30% of the population suffers from AR and that 15% develop asthma. AR is a major allergic disease which is frequently ignored both by the patients and doctors. A multi-centre study by the Asthma Epidemiology Study Group of the Indian Council of Medical Research found the prevalence of AR (manifested as “recurrent coryza”) in 3.5% of population in India.

Etiology
AR generally occurs in atopic individuals, often in association with atopic dermatitis, food allergy and urticaria. It has closely been associated with Asthma. Up to 40% of patients with rhinitis manifest asthma, whereas 70% of individuals with asthma experience rhinitis\[4\]. In cases of seasonal AR, the individuals develop the symptoms only in some specific months in accordance with the climate, weather and the environmental changes during that season. Seasonal antigens include pollens from grasses, flowers, weeds or trees. Perennial AR may be a specific reaction to antigens derived from house dust, fungal spores or animal dander,
but similar symptoms can be caused by physical or chemical irritants like pungent odors or fumes, including strong perfumes, cold air and dry atmospheres [8].

Age and Sex: There is no age prediction of onset of AR. It may start in infants as young as 6 months or it may even start in older people. Usually the onset is more common between the 2nd to 4th decades of life. Its prevalence decreases with age. It is equally affected in all sexes [6].

Predisposing Factors [6]

a. Heredity: It may be a familial condition. If both parents are atopic, there is a strong probability of the disease occurring in the off springs.

b. Climate: One of the major factors is climate and change of weather. Most of the nasal symptoms arise due to the temperature change, humid climate. These are the key triggers of the allergic conditions in atopic individuals.

c. Others: Early antibiotics usage, born during pollen season, maternal smoking in the early years of the child, environmental pollution are also some predisposing factors. Sometimes, the presence of other diseases or disorders (like asthma, eczema) may be associated with AR.

Precipitating factors
Allergens can be Endogenous as well as Exogenous. The most common allergens are the environmental inhalants like dust, pollen, animal odor, feathers, moulds, house dust and mites. Ingestants like eggs, fish milk, citrus fruits, and peanuts can cause severe allergy. Contactants like cosmetics, irritants like fumes and smoke, drugs like aspirin, iodine and nasal drops and even some bacterial infections with products of inflammation can cause allergy or they may be secondary invaders. The endogenous (within the body) allergens can be intestinal helminthes, tissue proteins in transudates & exudates [6].

Classification of AR
AR had been categorized as Seasonal Allergic Rhinitis (SAR) (occurs during a specific season) or Perennial Allergic Rhinitis (PAR) (occurs throughout the year) [7].

ARIA (Allergic rhinitis and its impact on asthma) guidelines on classification:

Table 1: Classification of AR as per ARIA

| Intermittent: Following conditions are present: |
| ~<4 days a week | Or for <4 consecutive weeks. |
| Persistent: Following conditions are present: |
| ~>4 days a week | And for >4 consecutive weeks. |

| Mild: None of the following conditions are present: |
| Sleep disturbance | Impairment of daily activities, leisure, and/or sport | Impairment of school or work | Troublesome symptoms. |
| Moderate/severe: One or more of the following conditions are present: |
| Sleep disturbance | Impairment of daily activities, leisure, and/or sport | Impairment of school or work | Troublesome symptoms. |

Pathophysiology
AR involves inflammation of the mucous membranes of the nose, eyes, Eustachian tubes, middle ear, sinuses, and pharynx. Invariably, the nose is always involved. Other organs are affected in certain individuals only. Inflammation of the mucous membranes is characterized by a complex interaction of inflammatory mediators but ultimately it is triggered by an immunoglobulin E (IgE) mediated response to an extrinsic protein [8].

When the specific protein (e.g. a specific pollen grain) is inhaled into the nose, it can bind to the IgE on the mast cells, leading to immediate and delayed release of a number of mediators. The mediators that are immediately released include histamine, tryptase, chymase, kinins and heparin. The mast cells quickly synthesize other mediators, including leukotrienes and prostaglandin D2. These mediators, via various interactions, ultimately lead to the symptoms of Rhinorrhoea (i.e. nasal congestion, sneezing, itching, redness, postnasal drip). Mucous glands are stimulated leading to increased secretions. Vascular permeability also increases leading to plasma exudation. Vasodilatation occurs, leading to congestion and pressure. Sensory nerves are stimulated which cause sneezing and itching. All of these events can occur in minutes; hence, this reaction is called the early, or immediate phase of the reaction [8].

Over 4-8 hours, these mediators, through a complex interplay of events, lead to the recruitment of other inflammatory cells to the mucosa, such as neutrophils, eosinophils, lymphocytes and macrophages. This results in continued inflammation, termed as the late-phase response. The symptoms of the late-phase response are similar to those of the early phase, but less sneezing and itching and more congestion and mucus production tends to occur. The late phase may persist for hours or days. Systemic effects including fatigue, sleepiness and malaise can occur from the inflammatory response. These symptoms contribute to impaired quality of life [8].

Clinical features
In the seasonal type, there are frequent sudden attacks of sneezing, with profuse watery nasal discharge and nasal obstruction. These attacks last for a few hours and are often accompanied by smarting and watering of the eyes along with conjunctival infection. In perennial rhinitis, the symptoms are similar but more continuous and generally less severe. Skin hypersensitivity tests with the relevant antigen are usually positive in seasonal AR, but are less useful in perennial rhinitis [5].

Symptoms
1. Rhinorrhoea (Nasal discharge): Thin and watery secretions are seen mostly but there can also be thick, purulent and colored mucous.

2. Nasal Obstruction: Swollen nasal turbinates are present. Chronic cases can also lead to development of Nasal Polyps and DNS (Deviated Nasal Septum).

3. Itching: Pruritis of the conjunctiva, nasal mucosa, and oropharynx are prominent.

4. Sneezing: Paroxysmal or episodic sneezing is most commonly seen.

Diagnosis & Investigations [9]
A good history taken clinically is most important for a correct diagnosis. Laboratory tests used in the diagnosis of AR include the following:
• Allergy skin tests (immediate hypersensitivity testing): An in vivo method of determining immediate (IgE-mediated) hypersensitivity to specific allergens.

• Fluorescence enzyme immunoassay (FEIA): Indirectly measures the quantity of immunoglobulin E (IgE) serving as an antibody to a particular antigen.

• Total serum IgE: Neither sensitive nor specific for allergic rhinitis, but the results can be helpful in some cases when combined with other factors.

• Total blood Eosinophil count: Neither sensitive nor specific for the diagnosis, but, as with total serum IgE, can sometimes be helpful when combined with other factors.

Imaging studies used in the diagnosis and evaluation of AR include the following

• Radiography: Can be helpful for evaluating possible structural abnormalities or to help detect complications or co-morbid conditions, such as sinusitis or adenoid hypertrophy.

• Computed tomography (CT) scanning and magnetic resonance imaging (MRI): Can be very helpful for evaluating acute or chronic sinusitis.

General management

Prevention & avoidance therapy: Avoidance is the most effective treatment for any allergic condition but may be limited in its applicability.

a. Pollens: Closing windows and remaining in air-conditioned environment can decrease exposure when pollen counts are high.

b. Animal dander: If the allergy is slight, the patient may usually benefit from merely keeping the animal out of the bedroom. However, it is necessary to remove the animal from the home altogether.

c. House dust and dust mites: The mattress and pillows should be encased in dust mite-proof material, and all other bedding should be washed weekly and dried at high temperature.

d. Mold spores: In outdoors, mold spores are unavoidable. Repairing leaks can control indoor mold contamination along with cleaning mold buildup on sinks, shower curtains and pipes regularly.

e. Foods: Most persons with well-documented food allergy are allergic to one or a small number of foods, so that avoidance is rarely a problem[10, 11].

Homoeopathic therapeutics for allergic rhinitis

1. **Agaricus muscarius**: It has nervous nasal disturbances. Itching internally and externally. Spasmodyc sneezing after coughing; sensitiveness; watery non-inflammatory discharge. Inner angles are very red. Sensation of soreness in nose and mouth [12].

2. **Agathis australis**: Hay asthma with sneezing and catarrh. It has coryza with constant, frequent or even paroxysmal sneezing. It has sneezing more in the sunshine. One sided nasal discharge, at night. Bloody discharge in the morning. Dripping nasal discharge, gummy discharge. Dryness inside the nose at night which is painful and itchy. One sided nasal obstruction at night and in morning. Tingling inside on blowing the nose [13].

3. **Aids nosode**: It has clear nasal discharges. Crusty scabs found inside the nose. Eruptions on nose which bleed when touched. It has thick, viscid and tough discharge from nose in the evenings. There is itching in nose. There is nasal obstruction, more in the mornings on waking up. It has burning, smarting pain in nose and sore pain which gets worse on touching. Dust allergy and painful sneezing with nosebleed. It also has tingling sensation inside the nose [13].

4. **Allanthus glandulosa**: Copious, thin, ichorous discharge from nose without foetor; rawness of nostrils, nose and upper lip covered with thick scabs; fluent catarrh with sneezing; lips cracked; eyes suffused and congested [14].

5. **Allium cepa**: It has acrid watery discharge from the nose, it drops from the tip of the nose. Cold after damp northeasterly winds. Cold begins mostly on left side and goes to the right. Catarrh, with epiphora and smarting of the eyes, with violent sneezing. He must take a long breath and then sneeze accordingly. Spring coryza; tingling and itching in right nostril, with burning acrid discharge Agg. In evenings and in a warm room; feels better in fresh air [14].

6. **Aralia racemosa**: It has obstruction worse in spring. Hay fever; frequent sneezing. The least current of air causes sneezing, with copious watery, excoriating nasal discharge, of salty acrid taste [12].

7. **Arsenicum album**: It has a thin watery discharge from the nose which excoriates the upper lip, but still the nose is stuffed up. There is much sneezing from irritation in the nose, but not a particle of relief there from; the coryza is worse after midnight or from a change of weather [15]. Arsenic patient is always taking cold in the nose, always sneezing from every change in the weather. He is always chilly and suffers from every draft of air and is aggravated in cold damp weather [16].

8. **Arum triphyllum**: Nose stopped up, agg. left side, must breathe through mouth; sneezing, worse at night; acrid fluent coryza and still nose feels stopped up; nostrils sore; nose, lips and face chapped as from a cold wind; aversion to light; smarting of eyes [14].

9. **Cassia sophera**: There is itching in the upper lids of eyes which is worse in sunlight and better after cold application. Heaviness of eyelids, better by cold open air. Burning pain in the eyes, better after lying down, sleep or cold applications. There is nasal obstruction at night and worse in cold. Nasal obstruction is better in warmth and in daytime. It is followed by watery nasal discharge. There is profuse, thin, watery, bland discharge. Dryness of nose in the morning, followed by watery discharge during the day. Complaints are better with cold, cold applications, cold air and cold drinks. It is worse in warmth [13].

10. **Dulcamara**: Nostrils entirely filled up, preventing breathing; constant sneezing; profuse discharge from nose and eyes, agg. In open air, & amel. In closed room; agg. On awaking and in the evening; cannot bear to be near cut grass or newly mown hay; amel. At the seaside. Dry coryza, agg. In cold air; discharge suppressed from least contact with cold, damp air, or from changes from hot to cold weather [14].

11. **Eucalyptus globulus**: It is commonly used in conditions with severe coryza and sore throat. There is stuffed up sensation in the nose with thin watery coryza and nose does not stop running. There is chronic catarrhal condition with purulent and fetid discharge.
There is tension felt across the nose and tightness across the bridge with ethmoid and frontal sinuses involved in coryza. Eyes are hot and have burning,smarting pain with catarrhal ophthalmic eyes. Eyelids are heavy. Complaints are worse periodically and at night \[13\].

12. Euphrasia officinalis: It manifests itself in inflaming the conjunctival membrane especially, producing profuse lachrymation. Patient is better in open air. Catarrhal affections of mucous membrane especially of eyes and nose. Profuse acrid lachrymation and bland coryza; worse in evening. Profuse and fluent coryza, with violent cough and abundant expectoration. Catarrhal conjunctivitis; discharge of acrid matter. The eyes water all the time. Burning and swelling of the lids. Pressure in eyes \[12\].

13. Hepar sulphur: It suits especially scrofulous and lymphatic who are inclined to have eruptions and glandular swelling. Sneezes every time he goes into a cold, dry wind with running from nose, later thick offensive discharge \[13\].

14. Histaminum muriaticum: All symptoms of skin and mucous membrane are of allergic type. It has burning and pruritis of the nose with a feeling that the skin of the nose is shrinking. Feeling as if the nasal orifices are enlarged. Feeling of painful dryness in the nostrils. Inspiration difficult and painful in cold air. Nose is blocked on one or both sides. Head is cold with blocked nostrils on one side with feeling of heat and pricking. Spasmodic rhinitis. Spasmodic closing of the eyes too with allergic conjunctivitis. Feeling of foreign body in the eyes, better by cold and agg. by draft of air. Feeling of heat and pruritis at the edge of the eyelids \[13\].

15. Kalium bichromicum: Pressure and pain at root of nose. Fetid smell. Discharge is thick, ropy, greenish yellow. Inflammation extends to obstruction of nose, violent sneezing \[12\].

16. Mercurius solubilis: Thick greenish yellow acrid stinking discharge. It is indicated in nasal catarrh, which is provoked by damp, chilly weather and by damp cool evening air and also agg. There by. The nose itches and burns and feels stuffed up, and with this there is a thin coryza \[18\].

17. Natrium arsenicosum: There is constant coryza; obstruction of nose. Catarrh with bad smell of nasal secretion. Many troubles of external nose. Posterior nasal catarrh. Hawking much mucus from throat; worse, slightest draught \[12\].

18. Phosphorus: There is sensation as if everything were covered with a mist or veil, or dust, or something pulled tightly over eyes. Patient sees better by shading eyes with hand. Edema of lids and about the eyes. Fan like motion of nostrils. Over sensitive to smell. Chronic catarrh, with small hemorrhages; handkerchief is always bloody \[12\].

19. Psorinum: Boring, stinging in right nostril, followed by excessive sneezing; burning, followed by thin nasal discharge, which relieves; nose sensitive when inhaling air; psoric constitution the cause of most hay fever, sometimes alternating with eczema \[55\]. According to Boericke, there is dry coryza, with stoppage of nose. Chronic catarrh; dropping from posterior nares \[12\].

20. Sabadilla: Eyelids are red and burning with lachrymation. It has spasmodic sneezing, with running nose, coryza, with severe frontal pains. There is copious, watery, nasal discharge. Complaints are worse from cold and cold drinks. They are better with warm things and wrapping up \[12\].

21. Sanguinaria canadensis: It has frequent sneezing, agg. by odors; watery acrid discharge with much burning; depraved smell; pain in frontal sinuses; dry cough; oppression, pain and soreness in upper part of chest with difficult wheezing breathing, wheezy whistling cough; asthma with desire to take a deep breath; cough agg. at night \[14\].

22. Sulphur: It is indicated in those who are subject to catarrhs, especially chronic, when scabs from in the nasal cavity, nose bleeds readily and is swollen, the alae especially are red and scabby. The nose is stuffed up while indoors, but breathing is unobstructed, when out in the open air. Discharge of burning mucus or secretion of thick, yellowish and puriform mucus in nostrils, Frequent even spasmodic sneezing sometimes preceded by nausea \[17\].

23. Teucrium marum verum: There is tingling in nose, frequent sneezing, followed by coryza; profuse smarting in ears, in open air; tearing and scraping in fauces; tickling in upper part of trachea. Agg. When coughing \[14\].

24. Wyethia helenoides: It has prickly sensation in posterior nares; granular appearance of the pharyngeal mucous membrane \[19\]. It has Hay fever symptoms like itching in posterior nares. Constant clearing and hemming. Dry posterior nares; no relief from clearing \[12\].

Conclusion

Allergic Rhinitis is a new emerging problem of the modern lifestyle. Conventional system of medicine has limited scope in treating AR. Common conventional medicines have a suppressive action only. They only suppress the symptoms which may lead to relapse of allergy in a greater intensity. Allergen avoidance is the only measure advised by most of the conventional physicians which is practically difficult in everyday life. Homeopathic medicines is useful in treating chronic, recurrent allergic rhinitis without suppressing the symptoms. There is a better scope in Homoeopathy for the treatment of AR, since the concept of Individualization makes it a unique system of medicine.

References


