

Non-Allergic/Vasomotor Rhinitis - The Great Imposter

Most patients (10-20% of the population) with sneezing, congestion, runny and itchy nose (rhinitis), postnasal drip and itchy, red eyes (conjunctivitis) during spring and fall have allergies to seasonal pollens. A high percentage of allergic individuals will be children. Whether someone will develop allergies depends on two factors: (1) genetics- is there a family history of allergy? and (2) environmental- is the individual old enough and been exposed to enough pollen? Symptoms due to allergies may be severe enough to cause a loss of time from work and school.

You would think that with a history of severe spring and fall symptoms, your allergist would find positive allergy skin tests and probably recommend allergy injections, right? Wrong! Interestingly, a percentage of patients with classic symptoms will be absolutely and unequivocally negative on skin testing. Allergy injections are not indicated and not possible, because these patients are not allergic. And yet patients are just as symptomatic, and just as miserable as the rest of us. How is this possible and what treatment is available?

Definition and Pathophysiology

The diagnosis of rhinitis without positive skin tests is divided into two subgroups. One subgroup, non-allergic rhinitis with eosinophilia, presents with allergy symptoms in addition to conditions such as nasal polyps and nasal eosinophilia (cells called eosinophils present in nasal mucosa), asthma and frequently sinusitis. The other subgroup, vasomotor rhinitis, presents with symptoms, especially congestion, but lacks other associated conditions.

The nasal mucosal lining has a rich blood supply that is under the control of the nervous system called the autonomic nervous system. Nonspecific stimuli may act on the autonomic nervous system. Nonspecific stimuli such as rapid changes in weather, temperature and humidity, drafts, exposure to chemicals, odors, perfumes, smoke and dust, emotions or stress may increase blood flow to tissue, resulting in swelling, congestion and rhinitis. A significantly deviated septum may induce changes in the mucosa, worsen the non-allergic or vasomotor rhinitis and cause more nasal congestion and drainage. And although the exact mechanism is not known, hormonal changes that occur with pregnancy, menstruation, menopause, hypothyroidism and oral contraceptives may cause symptoms of chronic non-allergic rhinitis.

Clinical Features and Treatment

Patients complain of chronic nasal congestion, rhinitis, postnasal drip and sneezing. Congestion and blockage may alternate from side to side and are usually constant, though

seasonal weather changes (during the spring and fall) may trigger symptoms that mimic pollen or dust allergies. Symptoms may be worse upon awakening in the morning. Examination reveals marked pink or pale nasal swelling obstruction and thick nasal secretions. In all cases, skin tests are negative. Patients with non-allergic but not vasomotor rhinitis will have eosinophils present in nasal secretions and frequently nasal polyps complicating the obstruction.

Therapy consists of avoiding triggers if possible, symptomatic treatment with saline, topical intranasal corticosteroids twice daily and oral decongestants as needed. Oftentimes, these treatments don't work and a patient may start overusing nasal decongestant sprays (i.e. Afrin, Neosynephrine). The antihistamine nasal spray Astelin, may effectively reduce congestion and control rhinorrhea. A very effective oral medication, Allerx-D, has an ingredient, methscopolamine, which reduces swollen nasal tissue and dries up postnasal drainage and studies show that Allerx is non-sedating. Two formulations, methscopolamine combined either with a decongestant or decongestant / antihistamine (Allerx Dose Pack) are available. Different formulations of this medication are also available for those that suffer adverse effects of decongestants. Other treatments include the non-steroidal intranasal spray Atrovent 0.03% and Patanase.

Thyroid replacement therapy will diminish symptoms associated with hypothyroidism. For pregnant patients, the rhinitis associated with pregnancy is temporary and usually resolves after pregnancy.