Rhinitis

Fadi J. Zaben RN MSN

IMET2000, Ramallah

April, 2013

Outline:

- Definition.
- Classifications.
- Pathophysiology.
- Sings and symptoms.
- Examination.
- Treatment.
- Nursing Consideration.

Definition:

- Rhinitis is a group of disorders characterized by inflammation and irritation of the mucous membranes of the nose. It may be classified as non-allergic or allergic.
- It is estimated that 10% to 15% of the population of the United States has allergic rhinitis
- Rhinitis may be an acute or chronic condition.

Classifications:

1. Allergic rhinitis.
2. Non-allergic rhinitis.
3. Infectious.
4. Drug-induced.
5. Vasomotor rhinitis.
6. Rhinitis of pregnancy.

Pathophysiology:

1. Non-allergic Rhinitis:

- ✓ Also known as non-allergic rhinitis with eosinophilia syndrome.
- ✓ Caused by a variety of factors, including environmental factors such as changes in temperature or humidity, odors, or foods; infection; age; systemic disease; drugs (cocaine) or prescribed medications; or the presence of a foreign body.

2. **Allergy Rhinitis:**

Immunoglobulin mediated response causing release of vasoactive substances from mast cells.

3. **Drug-induced rhinitis:**

It is associated with use of antihypertensive agents and oral contraceptives and chronic use of nasal decongestants.

4. **Infectious:**

Viral (common cold) and bacterial (purulent).

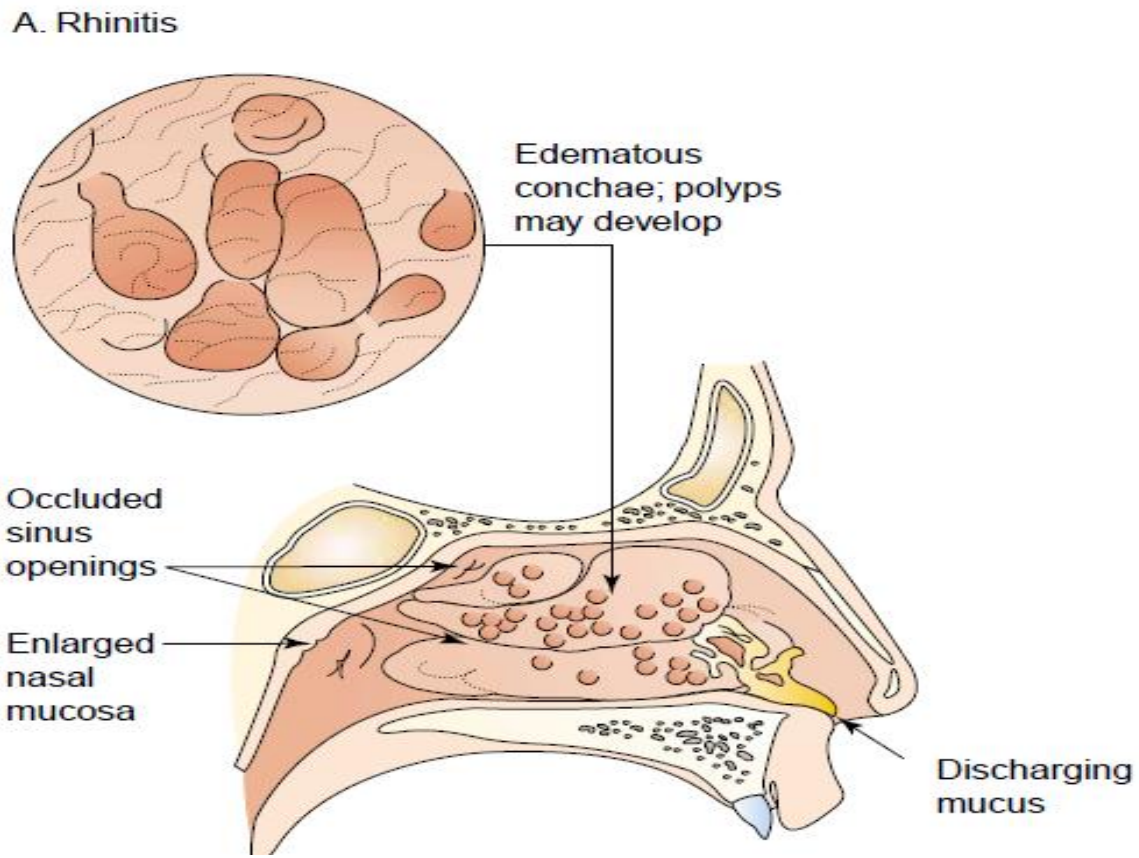
5. Vasomotor rhinitis:

Unexplained autonomic nasal dysfunction as a result of over activity of the parasympathetic nerve supply to the mucous membranes of the nose and paranasal sinuses.

6. Rhinitis of pregnancy:

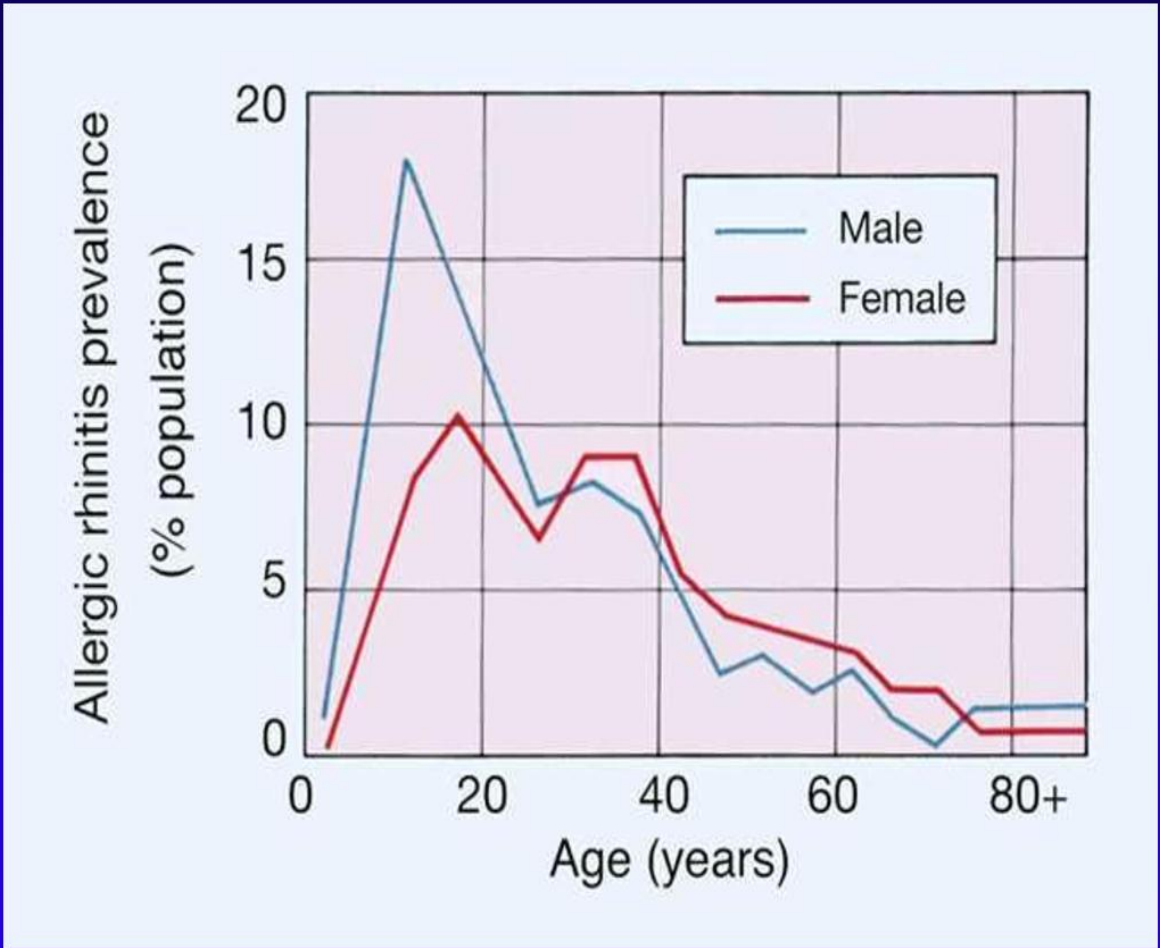
Nasal congestion resulting from estrogen-mediated mucosal engorgement (may also occur with oral contraceptive use).

Pathophysiology:

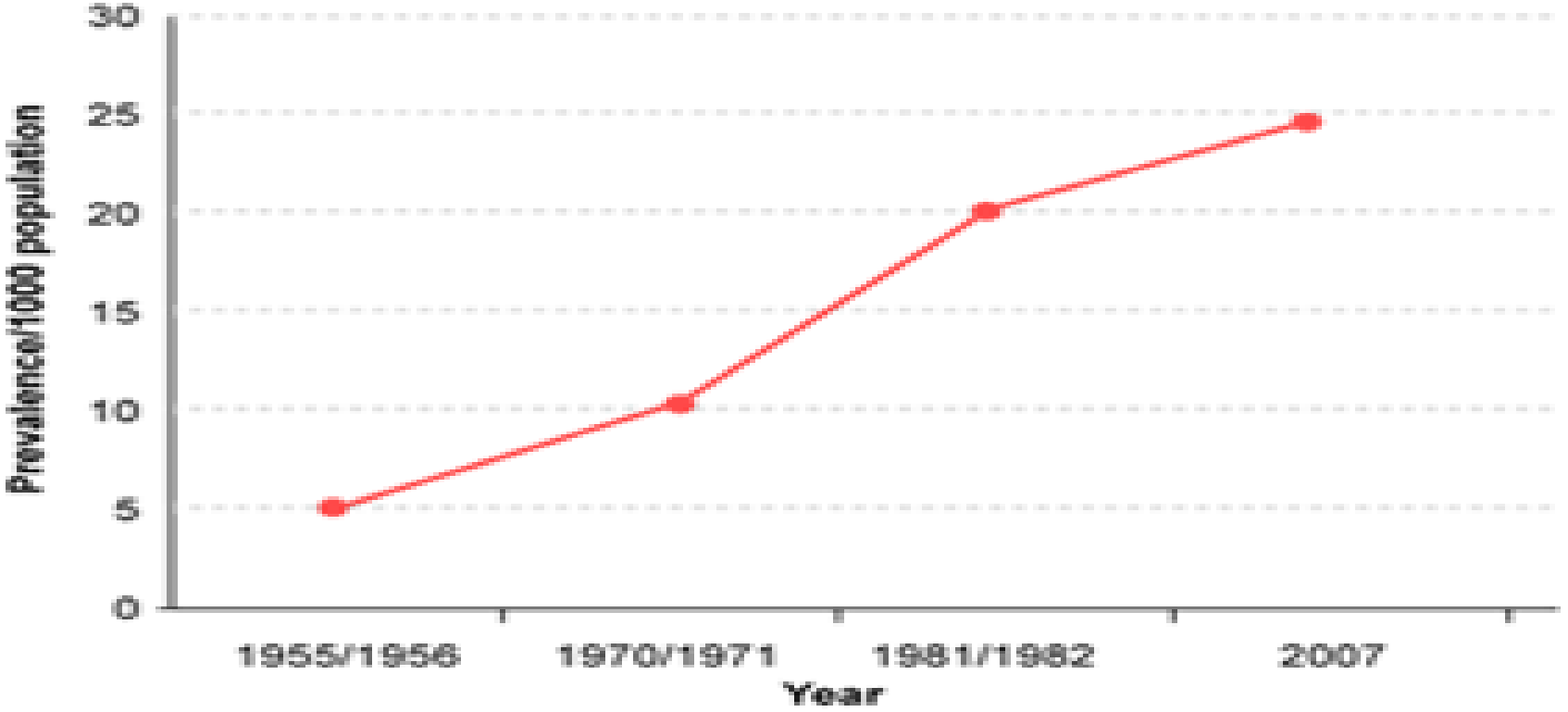


The mucous membranes lining the nasal passages become inflamed, congested, and edematous, blocking sinus openings and obstructing air passage.

Prevalence of Allergic Rhinitis by Age Group



The Prevalence of Allergic Rhinitis In England and Wales from 1950-2007 [1,2,3,4]



(1) Von Mutius E., Fritzsch C., Weiland SK., & Roll G, Magnussen H. 1992. Prevalence of asthma and allergic disorders among children in united Germany: a descriptive comparison. BMJ 305 : 1395-9.

(2) Muranaka M et al. 1986. Adjuvant activity of diesel-exhaust particulates for the production of IgE antibody in mice. J Allergy Clin Immunol 77:616-23.

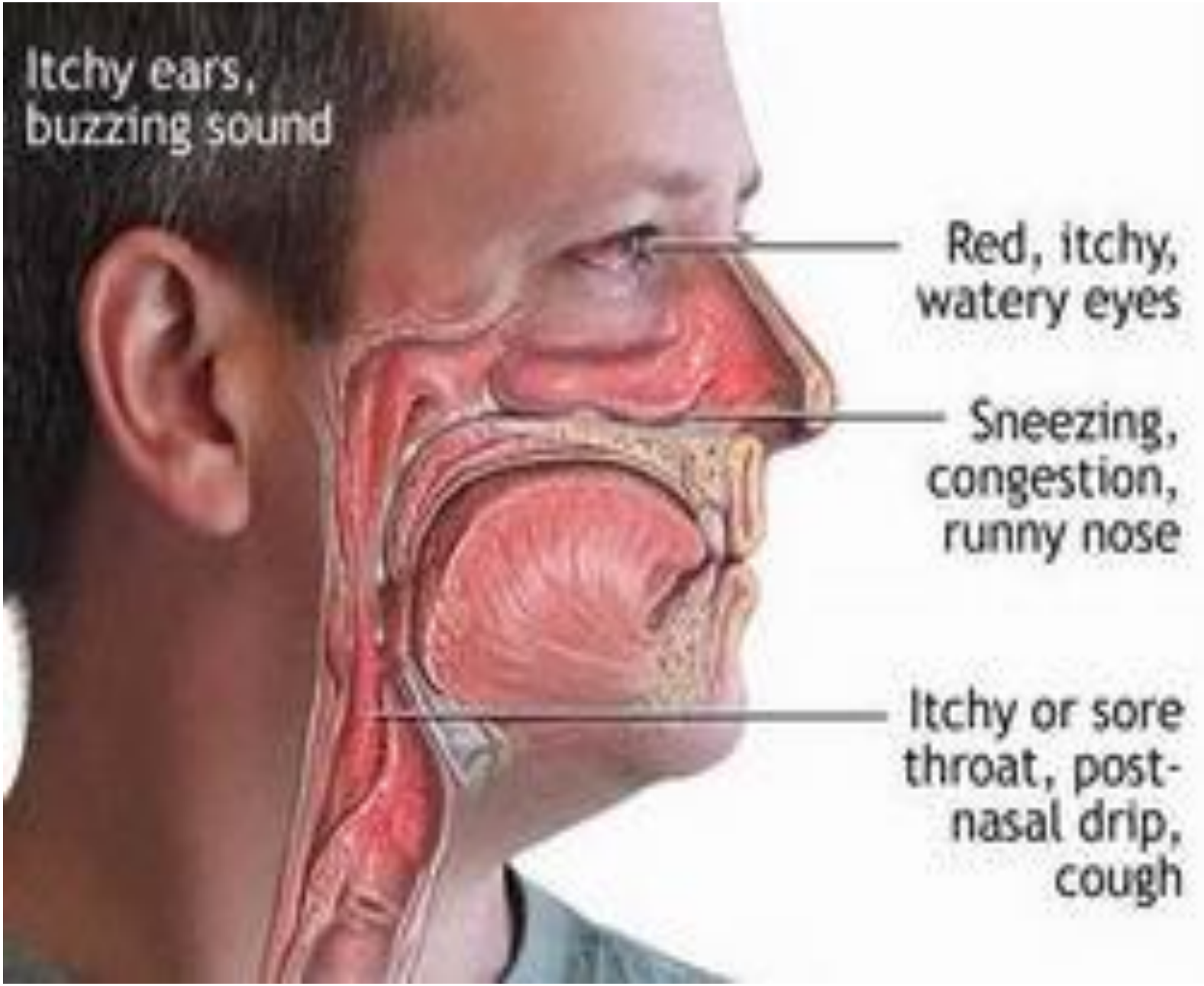
(3) Ishizaki T., Koizumi K., Ikemori R., Ishiyama Y., & Kushibiki E 1987. Studies of prevalence of Japanese cedar pollinosis among the residents in a densely cultivated area. Ann Allergy 58:265-70.

(4) Pharmabiz.nov 2007.

Clinical Manifestations:

The signs and symptoms of rhinitis include:

- ❖Rhinorrhea (excessive nasal drainage, runny nose).
- ❖Nasal congestion.
- ❖Nasal discharge (purulent with bacterial rhinitis).
- ❖Nasal itchiness, and sneezing.
- ❖Headache may occur, particularly if sinusitis is also present.


Itchy ears,
buzzing sound
Red, itchy,
watery eyes
Sneezing,
congestion,
runny nose
Itchy or sore
throat, post-
nasal drip,
cough

Investigations:

- **History –** Present illness, past medical history, family history, environmental history and impact on quality of life.
- **Physical Examination –** Nose, Eyes, Ears, Lungs and Skin.
- **Nasal exam with endoscope –** edematous IT, polyps.

Medical Management:

The management of rhinitis depends on the cause, which may be identified in the history and physical examination.

1. If viral rhinitis is the cause, medications are given to relieve the symptoms.
2. In allergic rhinitis, tests may be performed to identify possible allergens. Depending on the severity of the allergy, desensitizing immunizations and corticosteroids may be required
3. If symptoms suggest a bacterial infection, an antimicrobial agent will be used.

PHARMACOLOGIC THERAPY:

- Medication therapy for allergic and non-allergic rhinitis focuses on symptom relief.
  1) Antihistamines are administered for sneezing, itching, and rhinorrhea.
  2) Oral decongestant agents are used for nasal obstruction.
  3) Intranasal corticosteroids may be used for severe congestion, and ophthalmic agents are used to relieve irritation, itching, and redness of the eyes.

Figure 1. Environmental Control Measures for Patients With Allergic Rhinitis

House Dust Mites

Vacuum with double filtration system

Use air conditioning/dehumidifier to reduce humidity to < 50%

Encase mattresses and pillows in allergen-proof covers

Washing bedding in hot water (>130° F) every 2 weeks

Eliminate carpets and stuffed toys

Use wood, leather, or plastic furnishings

Pollens

Monitor pollen counts and limit outdoor activity when high

Shower after each outdoor activity to remove pollen from hair and skin

Avoid activities that increase pollen exposure

Molds

Avoid activities that increase exposure

Use dehumidifier, especially in damp areas

Use bleach or disinfectant to kill growth

Keep houseplants to a minimum

Nursing Management:

- The nurse instructs the patient with allergic rhinitis to avoid or reduce exposure to allergens and irritants, such as dusts, molds, animals, fumes, odors, powders, sprays, and tobacco smoke.
- The patient is instructed about the importance of controlling the environment at home and work.
- Saline nasal or aerosol sprays may be helpful in soothing mucous membranes, softening crusted secretions, and removing irritants.
- The nurse instructs the patient in the proper use of and technique for administrating nasal medications.

Continue……..

- To achieve maximal relief, the patient is instructed to blow the nose before applying any medication into the nasal cavity.
- In the case of infectious rhinitis, the nurse reviews with the patient hand hygiene technique as a measure to prevent transmission of organisms.
- The nurse teaches methods to treat symptoms of the viral rhinitis.
- In the elderly and other high-risk populations, the nurse reviews the value of receiving a vaccination in the fall in order to achieve immunity prior to the beginning of the “flu season.”