



Rhinitis

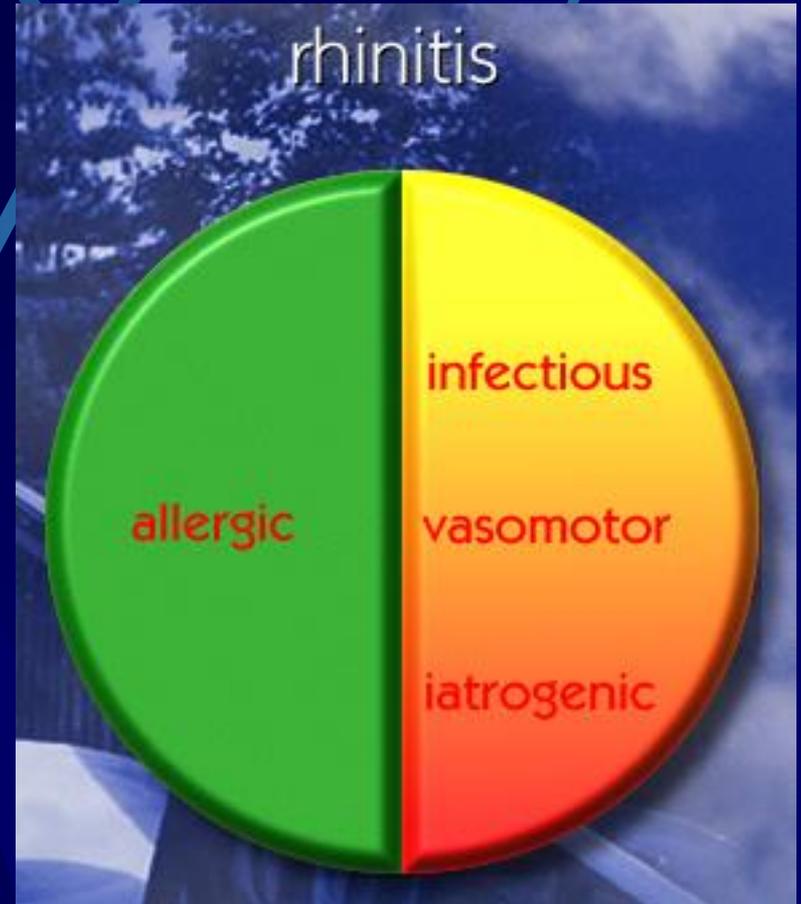
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Definition of Rhinitis

Rhinitis is inflammation of the lining of the nasal cavity. As the lining of the nasal cavity and the para nasal sinuses is continuous, inflammatory process tend to involve both areas to a greater or lesser extent.

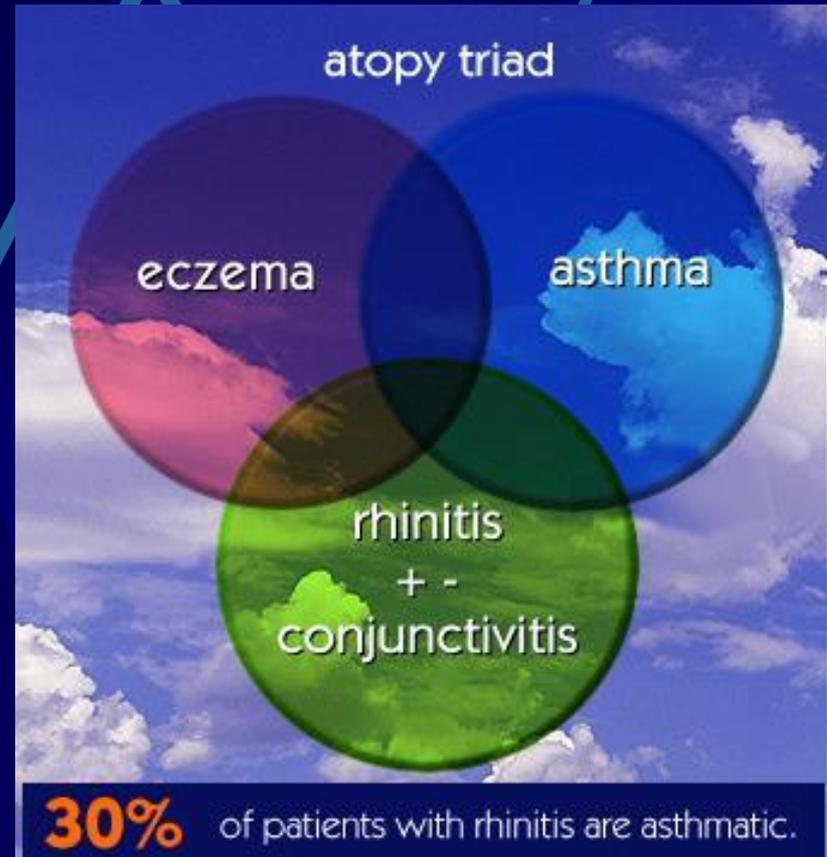
Classification of Rhinitis

- Allergy
 - Seasonal ,Perennial, food related ,drug induced
- Infectious
 - Acute
 - Chronic



Allergic rhinitis

- Its an IgE mediated hypersensitivity response to allergen lead to rhinitis ,associated allergic conjunctivitis and asthma may occur.
- The disease is common ,prevalence depend on age ,gender, geographical distribution



Allergic rhinitis classification

1. Intermittent (Seasonal)
2. Persistent (Perennial)
3. Mild
4. Moderate - severe

Seasonal rhinitis

1. Also known as intermittent rhinitis
2. It usually lasts less than 4 days a week
3. The whole disorder lasts for about a month
4. Usually caused due to exposure to seasonal Allergens like pollen
5. Common during spring when flowers bloom

Perennial rhinitis

1. Also known as persistent rhinitis
2. Symptoms last for more than 4 days a week
3. Whole disorder lasts for more than a month
4. This is due to continuous exposure to allergen. eg. House dust mite

Mild allergic rhinitis

Allergic rhinitis is considered to be mild if the symptoms

Does'nt cause:

Sleep disturbance

Impairment of daily activity

Impairment of work

Troublesome symptoms

Moderate allergic rhinitis

This includes one or more of the following:

Sleep disturbance

Impairment of daily activity

Impairment of work

Troublesome symptoms

Allergic rhinitis pathophysiology

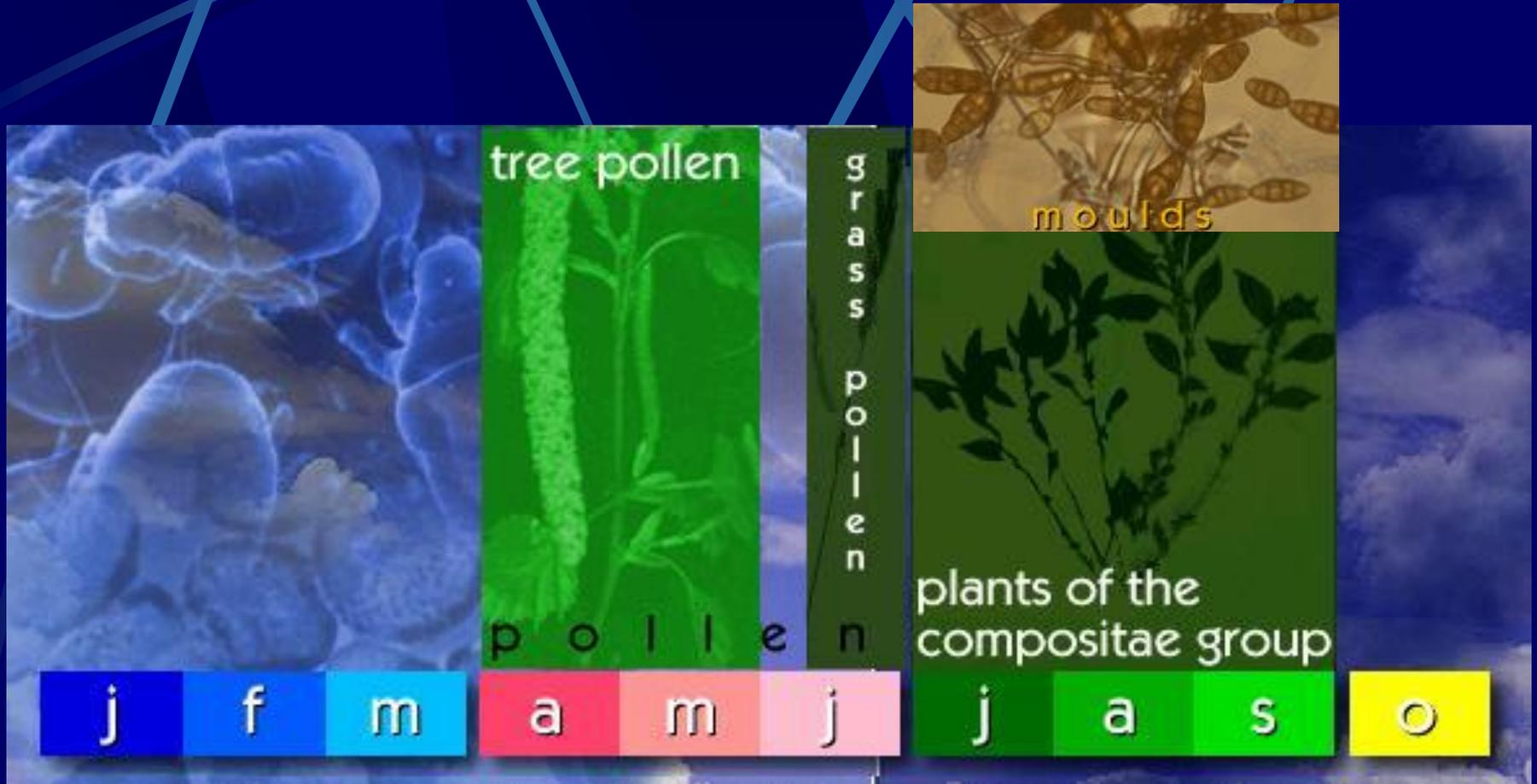
The reaction occurs in 4 phases

1. Sensitization
2. Subsequent reaction to allergen – early phase
3. Late phase reaction
4. Systemic activation

Pathological change

- Local mucosal change
 - edema
 - infiltration with eosinophils and plasma cells
 - watery discharge
 - vascular dilatation
 - polypi
 - Superadded infection
- Involvement of sinuses
 - generalized thickening
 - polypi in the sinuses(single or multiple)
 - fluid effusion in the sinuses

Etiology of Allergic Rhinitis:



Dust mite

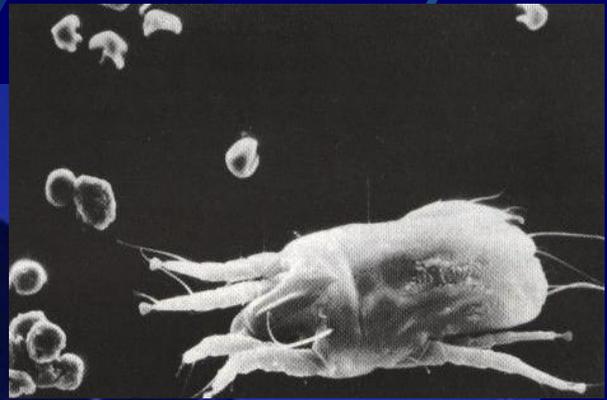
rhinitis



Fel d1



cats



other animals



cockroaches



occupational allergens



food allergens

Clinical features:

- Sneezing , may be in paroxysm.
- Rhinorrhea
- nasal obstruction and loss of smell
- Itchiness of nose ,eye,palate
- Tearing ,itching ,redness of eyes
- Burning sensation in the throat.
- symptom related to asthma (cough,shortness of breath, wheeze)

Occupational allergins

- Rhinitis may occur as a consequence of allergins inhaled in work place frequently associated with asthma
- Biological agent include flour (in baker ,grain worker), laboratory animal ,wood dust,biological washing powder,latex
- Chemical agent
 - paint manufacturer and painter (spray)
 - platinum salt in platinum refiner
 - drugs in pharmaceutical worker

Food induced rhinitis

- It's a rare cause of allergic rhinitis, symptom of rhinitis often associated with urticaria, angioedema and GIT symptom
- Food may occasionally provoke IgE induced rhinitis
- In children Milk, egg, cheese,
- In adult nuts ,fish, shellfish, citrus fruit

Examination

- General
- Local ENT examination
:allergic nasal mucosa appear pale or bluish, boggy with swelling and watery discharge. there may be polyp, structural (septal deviation ,prominent turbinate).
- Systemic

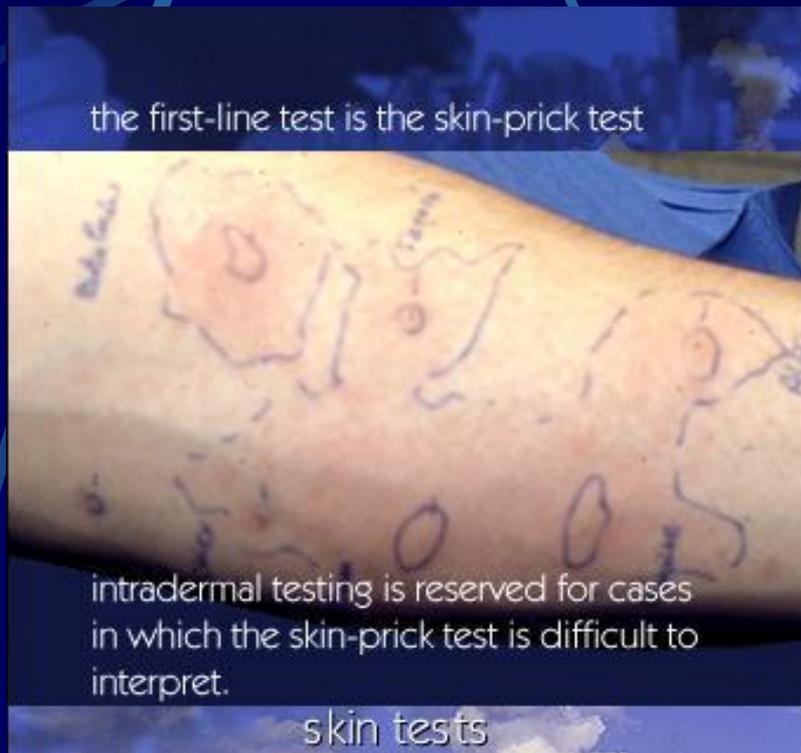


Investigations

1- Skin Tests: it's a primary tool in the investigation of allergy .its positive in seasonal rhinitis ,less than 50%in others

- it consist of pricking skin ,with special needle few drops of allergin .
- Appearance of wheal and flare in 15-20 min ,the size of wheal is usually equal or greater than 3mm and interpreted by positive and negative control
- Antihistamine should be discontinued 3-6 days before test
- Intradermal test is rarely used because of extensive tissue reaction or anaphylaxis

Skin prick test

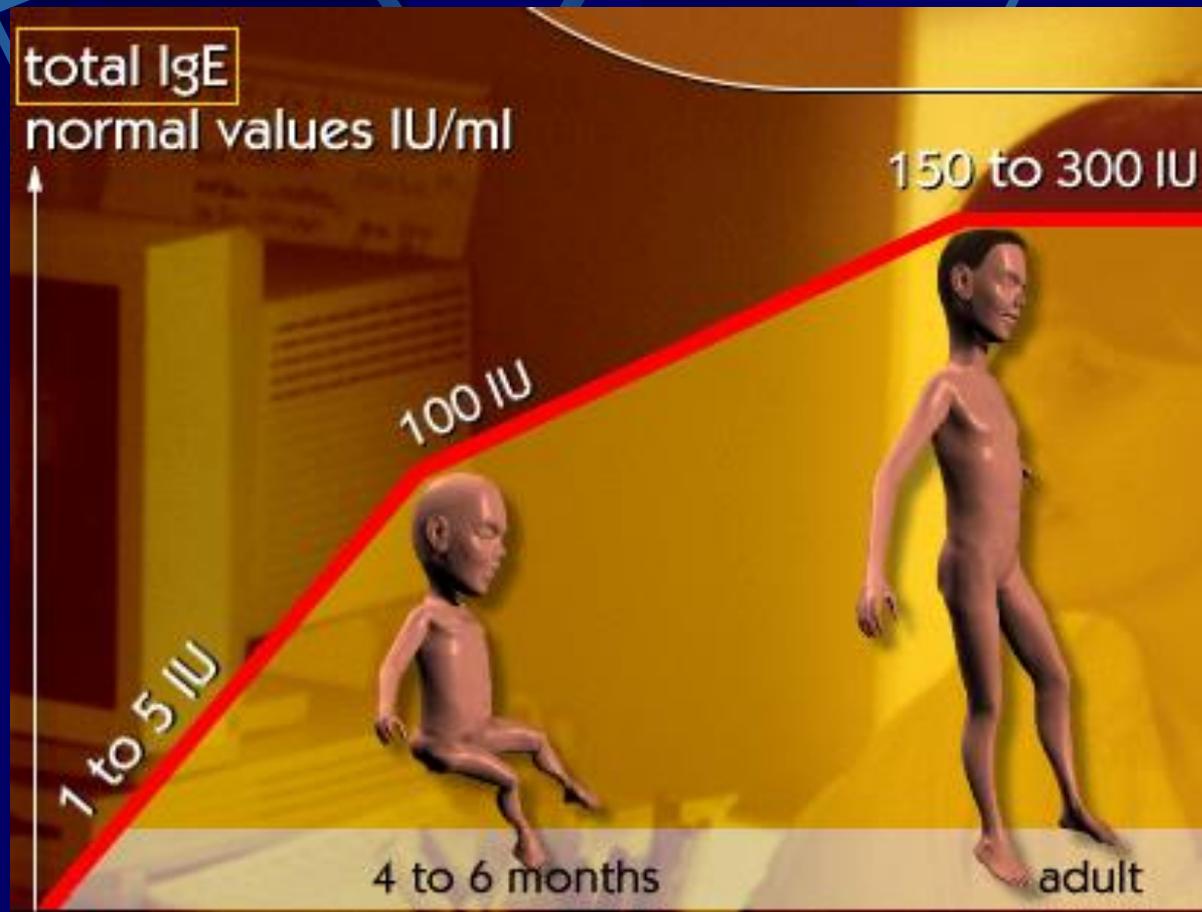


Laboratory tests:

- Laboratory tests:
 - nasal cytology, eosinophil count in nasal secretion, blood
 - IgE level measurement (total Specific(RAST,ELISA, cap test))



- A raised IgE level usually confirm allergic constitution but it is neither sensitive nor specific
- Elevated level seen in smoker and parasitic infestation



treatment

- Avoidance of allergins .
- Drugs .
- Immunotherapy (desensitization) .
- Surgery .

Type of drug	Drug and administration
Antihistamines	<ul style="list-style-type: none"> ● Systemic : sedating , non sedating
Steroid	<ul style="list-style-type: none"> ● Topical : beclomethazone, fluticasone ● Systemic (short course)
Alpha receptor agonist (decongestant)	<ul style="list-style-type: none"> ● Topical : pseudoephedrine ● Systemic : xylometazoline
Mast cell stabilizer	<ul style="list-style-type: none"> ● Topical : cromoglycate ● Systemic : ketotifin
Anticholinergic	<ul style="list-style-type: none"> ● Topical : ipratropium ● Systemic : hyoscine
Anticholinergic/ sympathemetic	<ul style="list-style-type: none"> ● Systemic: imipramine , chlorpheneramine

Desensitization :

- it consist of injection of allergin in increasing dose S.C to be tolerated by the subject.
- Sublingual allergin available ,its popular but less effective .

surgery

- Polypectomy
- Reduction surgery of inferior turbinate

Drug Induced Rhinitis

NSAID

Beta blockers

ACEI

Oral contraceptives

Rhinitis Medicamentosa

The condition is the result of over medication with local nasal decongestants causing rebound phenomenon occurs resulting in turbinate hypertrophy. If the decongestant treatment is repeated the condition become rapidly self-perpetuating and a chronic nasal obstruction unresponsive to decongestant results. The treatment is immediate cessation of the decongestant with replacement by nasal or systemic steroid. If this is not successful then inferior turbinectomy may be required.

Hormonal induced rhinitis

- Menstruation ,pregnancy
- Untreated hypothyroidism
- Sexual excitement (Honeymoon rhinitis)

Infective Rhinitis

Acute rhinitis

Non Specific:

- *infections of ext.nose
- *Coryza (commone cold)
- *Influenza

Specific

Gonorrhoea

candidiasis

Diphtheria

Syphilis

Erysipelas

Glanders

Anthrax

Chronic rhinitis

Specific

T. B

Lupus Vulgaris

Syphillis

Fungi

Glanders

Rhinoscleroma

diphtheria

Sarcoidosis

Gangosa

non specific

Simple chronic

Atrophic

Rhinitis sicca

Infections of external nose

- **Furunculosis**
- **Infection of hair follicles**
- **Hard tender painful red**
- **Cavernous sinus thrombosis**
- **Local heat application**
- **Systemic A.B.**
- **Parantral A.B. (if large or cellulitis)**

● **Vestibulitis :**
inflammation of nasa
vestibules

- ❖ **Usu. Staf. Aureus**
- ❖ **Coryza**
- ❖ **Atopy**
- ❖ **Unilateral :F.B.**

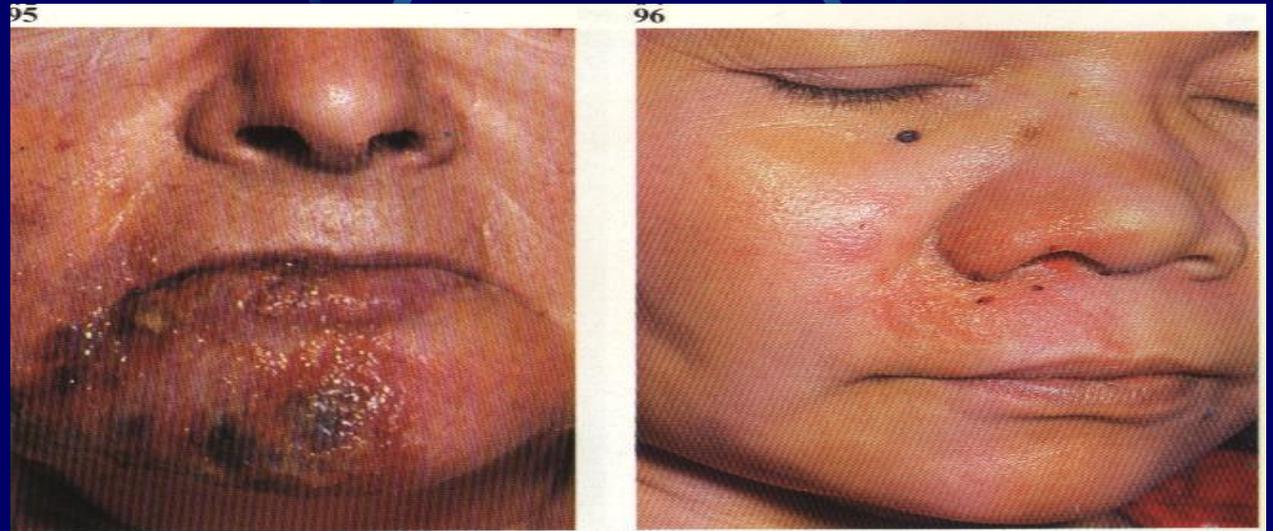


219 A foreign body in the nose causes a unilateral purulent and fetid nasal discharge. A child with these symptoms and a vestibulitis is almost certain to have a foreign body in the nose.



220 Vestibulitis affecting one nostril, as in this case, is almost always diagnostic of a foreign body.

- Herpes zoster :
- *Ophthalmic branch of trigeminal n.*
- *Cheek ,palate & vestibule*



Thank you