Rhinosinusitis

- inflammation of the mucous lining of the sinuses and the nasal cavity.
- classified to -> Acute, Recurrent acute , Chronic, Chronic with acute exacerbation.
- Most common at winter / re-activation of the viruses.

- Old classification :

Acute (<3 M)

Viral	Bacterial	Fungal
- 50%	- 2%	- Rare
- Rhino virus	- 2ry to viral	- Chronic
Adeno, RSV	- S.pneumonia	- Asperigillus
Influenza.V	- discharge > 7 days	& Candida
- symptoms decrease after < 4 days	- symptoms increase. after > 4 days	-Sever discomfort
- **Watery** discharge	- **Mucopurulent**.	
- **low grade fever**	- **High grade fever**	

- local: Nasal congestion, Sneezing, Runny nose, Hyposmia
- Systemic : headache, fatigue, malaise, anorexia & low grade fever.
- Signs : Redness, swelling of mucosa & congested nose.

CT —> **mucosal thickening, gas fluid level, gas bubbles, Obstruction of the osteomeatal**

Complications of rhinosinusitis
- Orbital: cellulites, abscess
- Aural: otitis media
- Facial: osteomyelitis, cellulites
- Intracranial: meningitis, cavernous sinus thrombosis
- Lower airways: laryngitis, bronchitis, pneumonia.

- **Treatment**:

Viral: Supportive treatment / decongestants, bed rest & pain killers.

Bacteria : // // Antipyretics, Nasal washing with saline, Abx(amoxicillin & clavulanic acid-> Quinolones) 5-10 days

Chronic (> 3 M) ...Often associated with .. bronchial asthma, eczema and cystic fibrosis

Infective

Simple

- Bacterial/ strep. P, staph.a
- **Structural abnormality** /septal.d , polyps, CF, tumor, trauma, dental infx

Acute bacterial-> damaged cilia-> cycle of infx

Active-> symptoms of acute bacterial.R

Chronic-> vague symptoms/ anosmia, sore throat, post nasal drip, headache, voice changes, silent.

Specific

- TB, Syphilis / Granulomatous infx
- Infx from body-> sinuses & nasal cavity -> Septal perforation : Ant: TB..... Post: Syphilis

- Diagnosis :- Biopsy then culture
- Tx :- ?

Diagnosis: **CT** scan and **endoscopy** / X-rays is USELESS

Treatment: Antibiotics (as above .. 4-6 wks) , steroids , decongestants, nasal lavage , painkillers.

If failed? Surgery / **functional endoscopic sinus surgery ... FESS**

Non-infective

Atrophic

- F>M / hormonal
- **Klebsiella** /ozaena & **trauma**
- Atrophied mucosa -> fragile
-> easy to peel by the pt
-Anosmia, epistaxis, ozena, nasal crusting

Diagnosis : **CT**, **endoscopy**
Tx : regular peeling of the mucosa & lubricants & replacement (Vitamin A, potassium iodide, iron therapy, estrogen)
If fails? surgical / ↓ size of nasal openings

Hypertrophic

a. **Non-Allergic**

a) Rhinitis medicomentosa :- stop decongestant + give steroids.

b) Hormonal :- two types
1) Honey moon rhiniti -> steroids
2) Late pregnancy rhinitis -> steroid& spontaneously relieve

c) Senile rhinitis :- overstimulation of the Para.SNS -> ipratropium bromide.

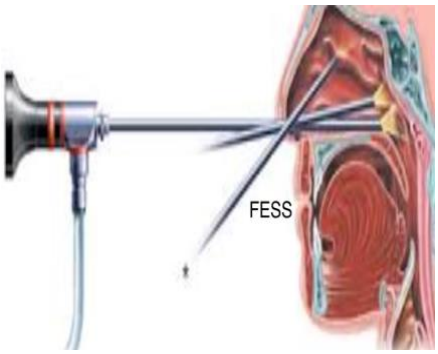
d) Vasomotor rhinitis :- Dx by exclusion, -> give steroids

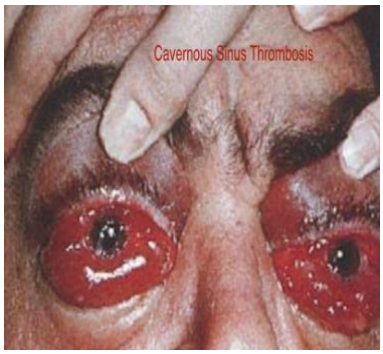
b. **Allergic** **MC**

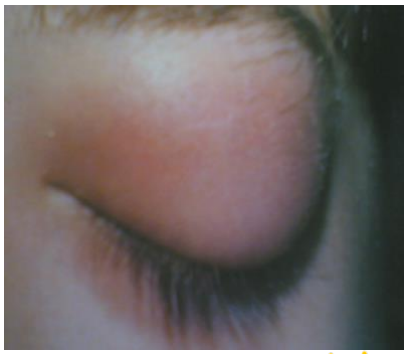
-**IgE** .. HS 1
-Airborne 90% or Food
> 2nd exposure-> Mast cell
Vasodilatation /**congestion**
Nerve ending stimulation / **sneezing** & **itching**
Stimulation of glands/ **rhinorhea**

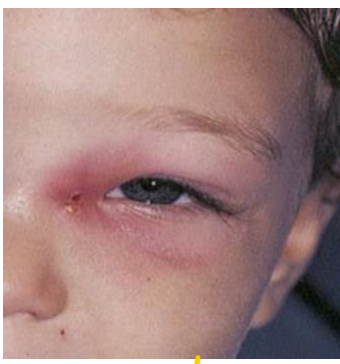
Acute phase —> by Histamine —> reddish mucosa , Watery, itchy eyes
Chronic phase —> by eosinophils —> pallor, bluish mucosa, increase secretions.
cobblestone appearance of pharynx, nasal crease and puffiness of the lower nose.

Investigations
RAS test, Skin prick test, Eosinophills level in blood, IgE level in serum, **Nasal challenge test** (most specific)
Treatment :
Avoidance, Decongestants, Antihistamines, Steroids, Desensitization (only effective if the patient have one known allergen)

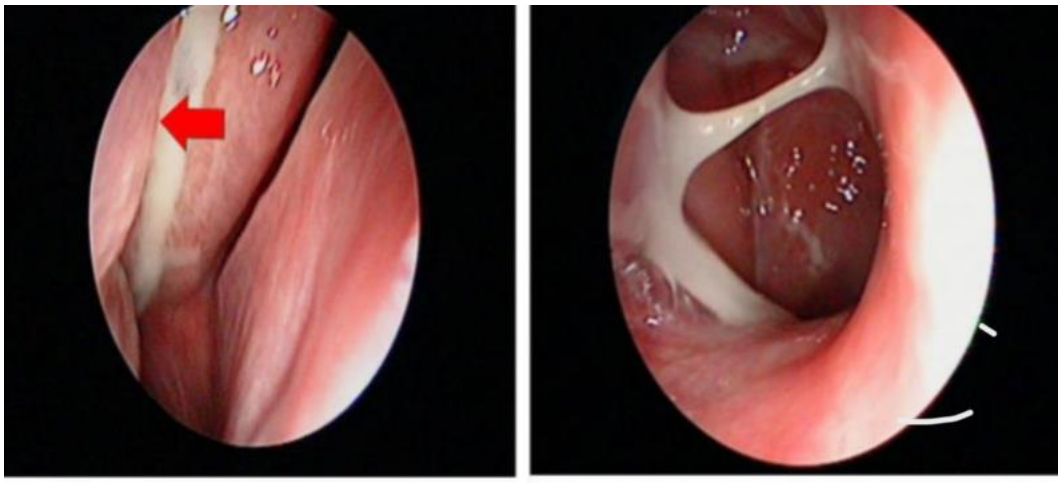








orbital complications



Acute rhinosinusitis: an endoscopic view of the nose showing yellowish pus draining from one of the sinuses (*left picture*) and into the throat (*right picture*). © Vincent Ti