

# 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

- 50%
- **Rhino virus**
- Adeno, RSV
- Influenza.V
- symptoms decrease after < 4 days
- **Watery** discharge
- **low grade fever**

### Bacterial

- 2%
- 2ry to viral
- **S.pneumonia**
- discharge > 7 days
- symptoms increase after > 4 days
- **Mucopurulent.**
- **High grade fever**

### Fungal

- Rare
- Chronic
- **Asperigillus** & **Candida**
- Sever discomfort

Maxillary: Adult  
Ethmoidal: child

## Complications of rhinosinusitis

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

- 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

## - **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



### 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, Eosinophils 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)

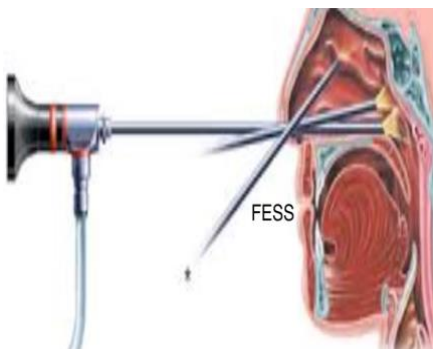


### Hypertrophic

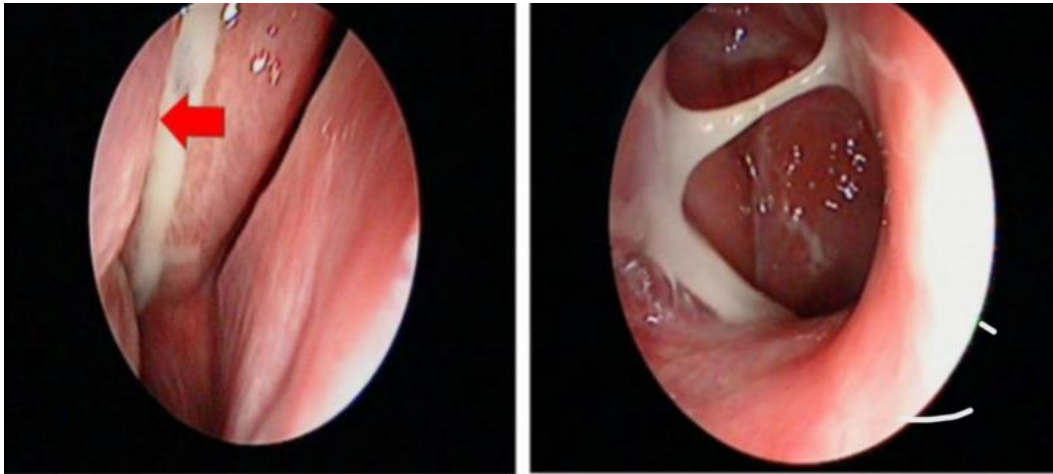


#### a. Non-Allergic

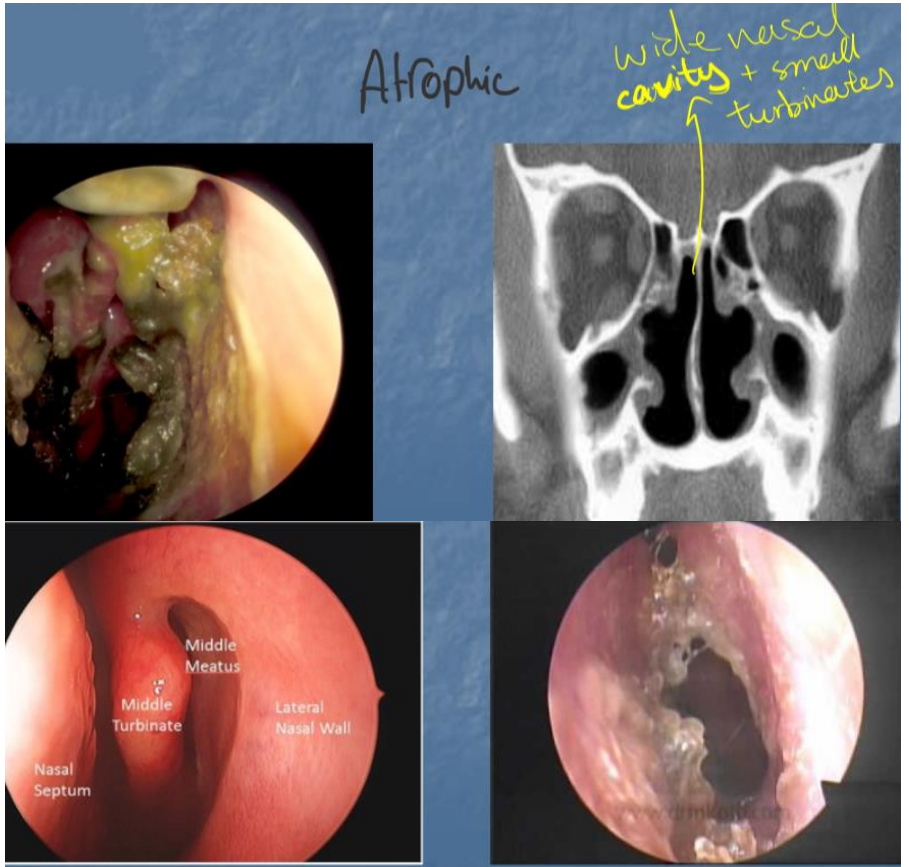
- Rhinitis medicamentosa :- stop decongestant + give steroids.
- Hormonal :- two types
  - Honey moon rhinitis -> steroids
  - Late pregnancy rhinitis -> steroid& spontaneously relieve
- Senile rhinitis :- overstimulation of the Para.SNS -> ipratropium bromide.
- Vasomotor rhinitis :- Dx by exclusion, -> give steroids



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 Tl



Cobble-stone pharynx