

# **SINUSITIS**

***PREPARED BY  
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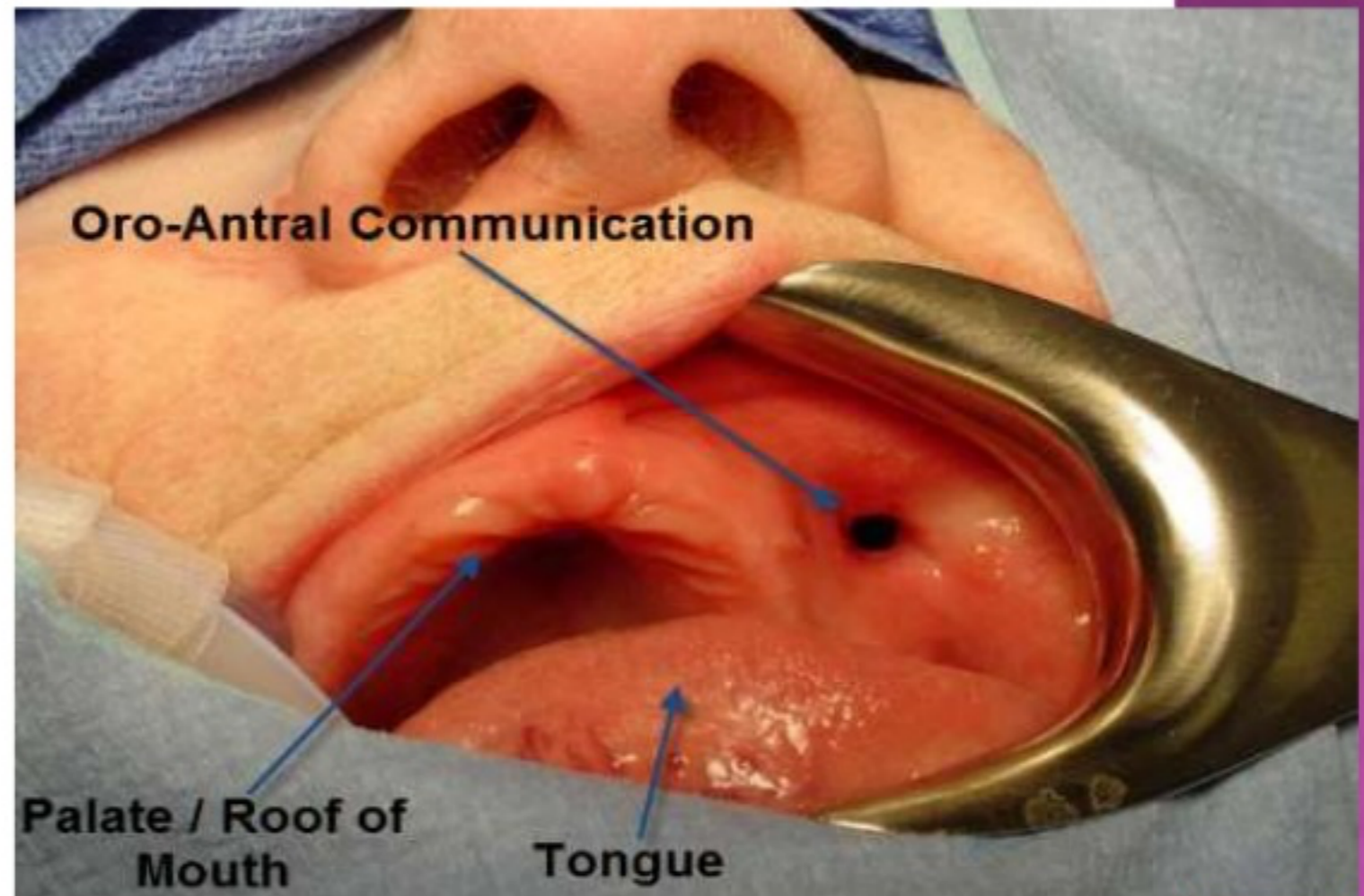
# ACUTE MAXILLARY SINUSITIS

## AETIOLOGY:

- ⊙ Dental infections (periapical dental abscess, oroantral fistula).
- ⊙ Viral rhinitis followed by bacterial invasion.
- ⊙ Diving and swimming.
- ⊙ Trauma (fractures and penetrating injuries).

## Clinical features :

- ⊙ Constitutional symptoms.
- ⊙ Headache.
- ⊙ Pain.
- ⊙ Tenderness.
- ⊙ Redness and edema of cheek.
- ⊙ Nasal discharge.
- ⊙ Postnasal discharge.



## TRANSILLUMINATION TEST:



TRANSILLUMINOSCOPE



TRANSILLUMINATION OF MAXILLARY SINUS

# TREATMENT:

## MEDICAL

- ⊙ Antimicrobial drugs( ampicillin/amoxicillin/erythromycin)
- ⊙ Nasal decongestant drops ( 0.1% oxy or xylometazoline).
- ⊙ Steam inhalation.
- ⊙ Analgesics.
- ⊙ Hot fomentation.

## SURGICAL

- ⊙ Antral lavage



NASAL SPRAYS

# ACUTE FRONTAL SINUSITIS

## **AETIOLOGY:**

- ⊙ Viral rhinitis followed by bacterial invasion.
- ⊙ Diving and swimming.
- ⊙ Trauma (fractures and penetrating injuries).
- ⊙ Oedema of middle meatus 2<sup>o</sup> to ipsilateral maxillary sinus infection.

## **CLINICAL FEATURES:**

- ⊙ Frontal headache.(OFFICE HEADACHE)
- ⊙ Tenderness.
- ⊙ Oedema of upper eyelid.
- ⊙ Nasal discharge.

## **DIAGNOSIS:**

- ⦿ Xray: WATER'S VIEW/LATERAL VIEW.
- ⦿ CT is preferred.

## **TREATMENT:**

### **MEDICAL**

- ⦿ Antimicrobial drugs.
- ⦿ Nasal decongestant drops.
- ⦿ Steam inhalation.
- ⦿ Analgesics.
- ⦿ Hot fomentation.



# SURGICAL

Trephination of frontal sinus.



# ACUTE ETHMOID SINUSITIS

## **AETIOLOGY:**

- ⊙ *Associated with infection of other sinuses.*

## **CLINICAL FEATURES:**

- ⊙ *Pain.*
- ⊙ *Oedema of lids.*
- ⊙ *Nasal discharge(middle or superior meatus).*
- ⊙ *Swelling of the middle turbinate.*



# ACUTE SPHENOID SINUSITIS

## **AETIOLOGY:**

- ⊙ As a part of pansinusitis.
- ⊙ Associated with infection of posterior ethmoid sinuses.

## **CLINICAL FEATURES:**

- ⊙ Headache.
- ⊙ Postnasal discharge.

## **DIAGNOSIS:**

- ⊙ Xray/CT.

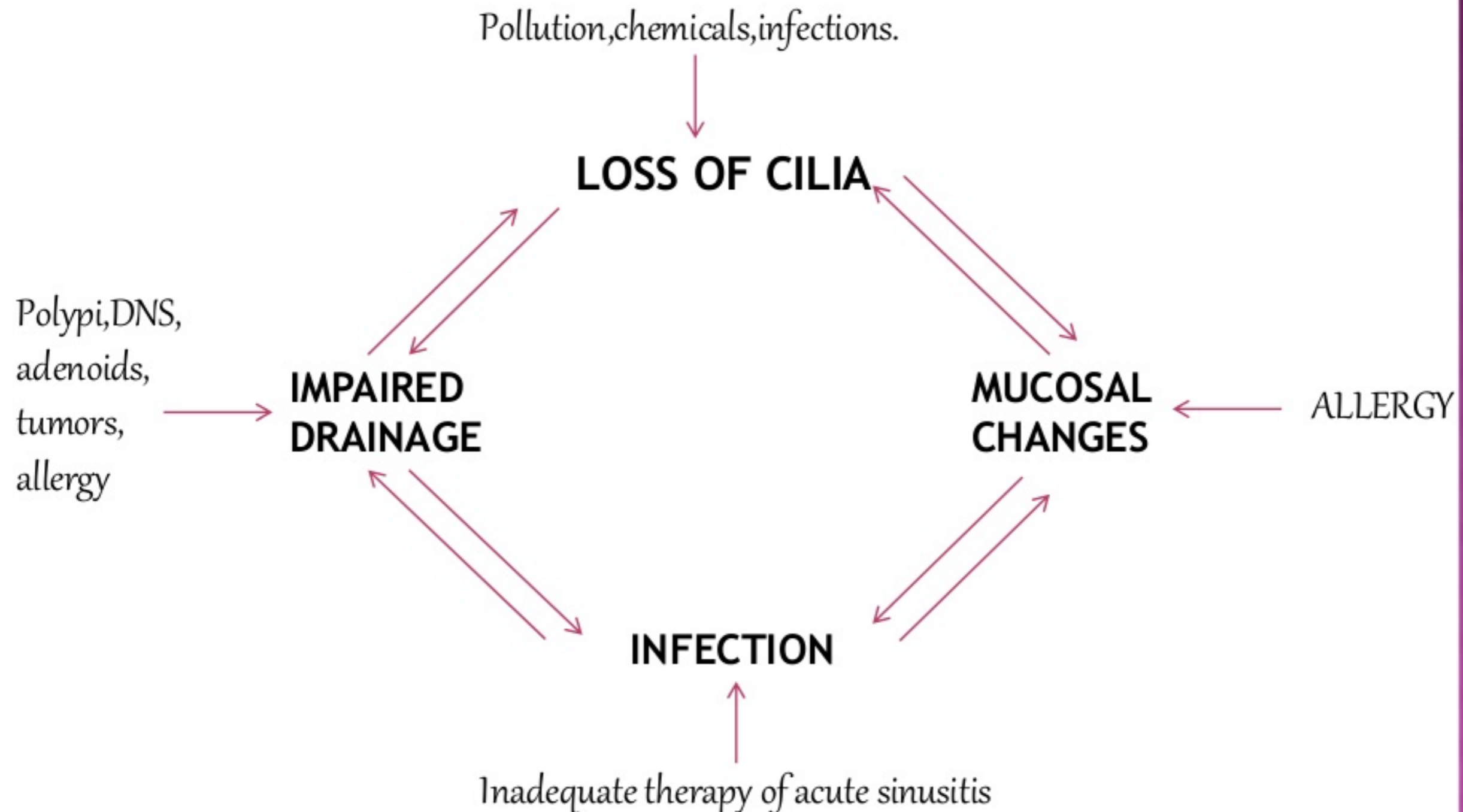
## **TREATMENT:**

- ⊙ Medical treatment same as for acute maxillary sinusitis.



# CHRONIC SINUSITIS

- It is the sinus infection lasting for months or years.
- Important cause is failure of acute infection to resolve.
- PATHOPHYSIOLOGY:**



## **PATHOLOGY:**

- ⊙ Destruction and healing of sinus mucosa.
- ⊙ Hypertrophic sinusitis.
- ⊙ Atrophic sinusitis.
- ⊙ Submucosa infiltrated with lymphocytes and plasma cells.

## **CLINICAL FEATURES:**

- ⊙ Similar to acute sinusitis but of lesser severity.
- ⊙ Purulent nasal discharge is the commonest complaint.
- ⊙ Foul smelling discharge( anerobic infections).
- ⊙ Local pain and tenderness are not marked.
- ⊙ Nasal stuffiness and anosmia(in some patients).

## DIAGNOSIS:

- ⊙ Xray (mucosal thickening)
- ⊙ Xray with contrast.
- ⊙ CT
- ⊙ Aspiration( pus is confirmatory).



**NORMAL  
SINUSES**



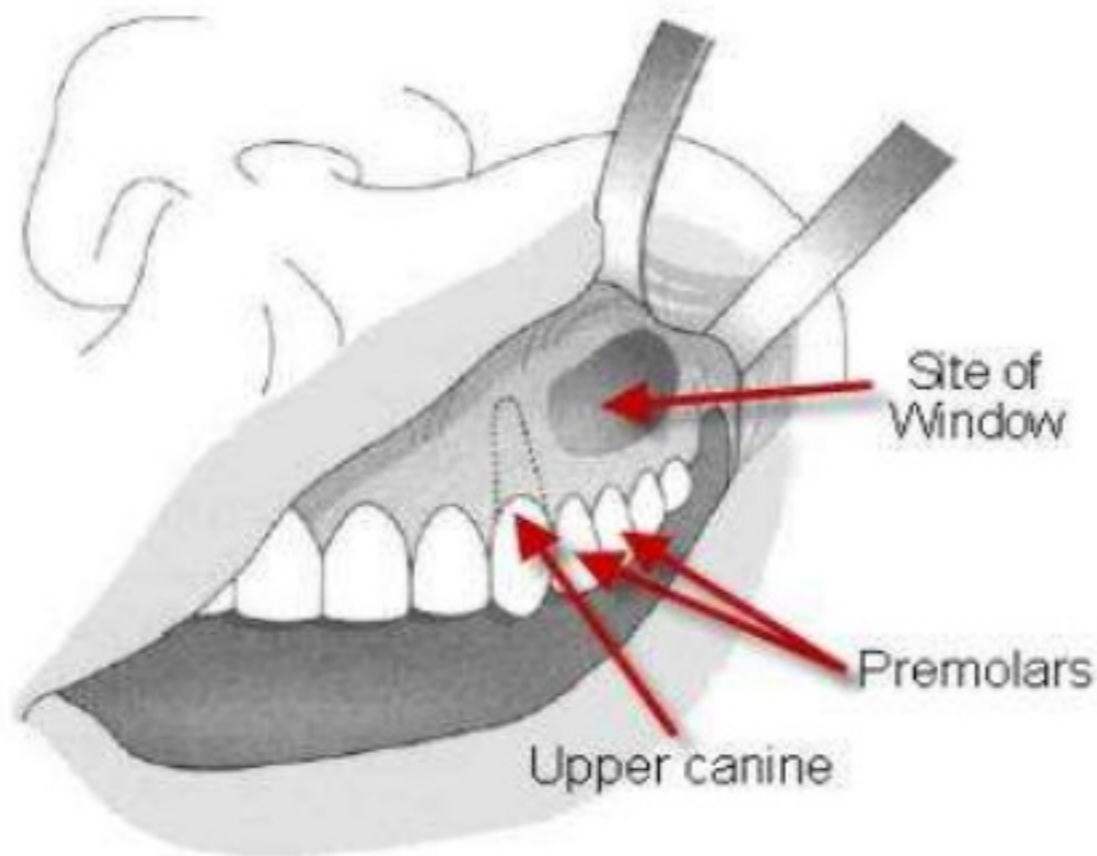
**SINUSITIS  
(SEE THE  
BLOCKED  
AREAS?)**

## TREATMENT

- ⊙ Cause for obstruction of sinus drainage and ventilation to be found out.
- ⊙ Work up on nasal allergy may be required..
- ⊙ Culture and sensitivity ( selection of antibiotic).
- ⊙ Conservative management(antibiotics, decongestants, antihistaminics)

# SURGICAL TREATMENT:

- CHRONIC MAXILLARY SINUSITIS
- Antral puncture and irrigation.
- Intranasal antrostomy.
- Caldwell-luc operation.



ANTRAL PUNCTURE

The *Caldwell-Luc* surgical procedure showing the site of the window into the anterior maxillary sinus

## CHRONIC FRONTAL SINUSITIS

- ⦿ Intranasal drainage operations.
- ⦿ Trephination of frontal sinus.
- ⦿ External fronto-ethmoidectomy.  
(Howarth or Lynch's operation)
- ⦿ Osteoplastic flap operation.



HOWARTH'S OR LYNCH OPERATION

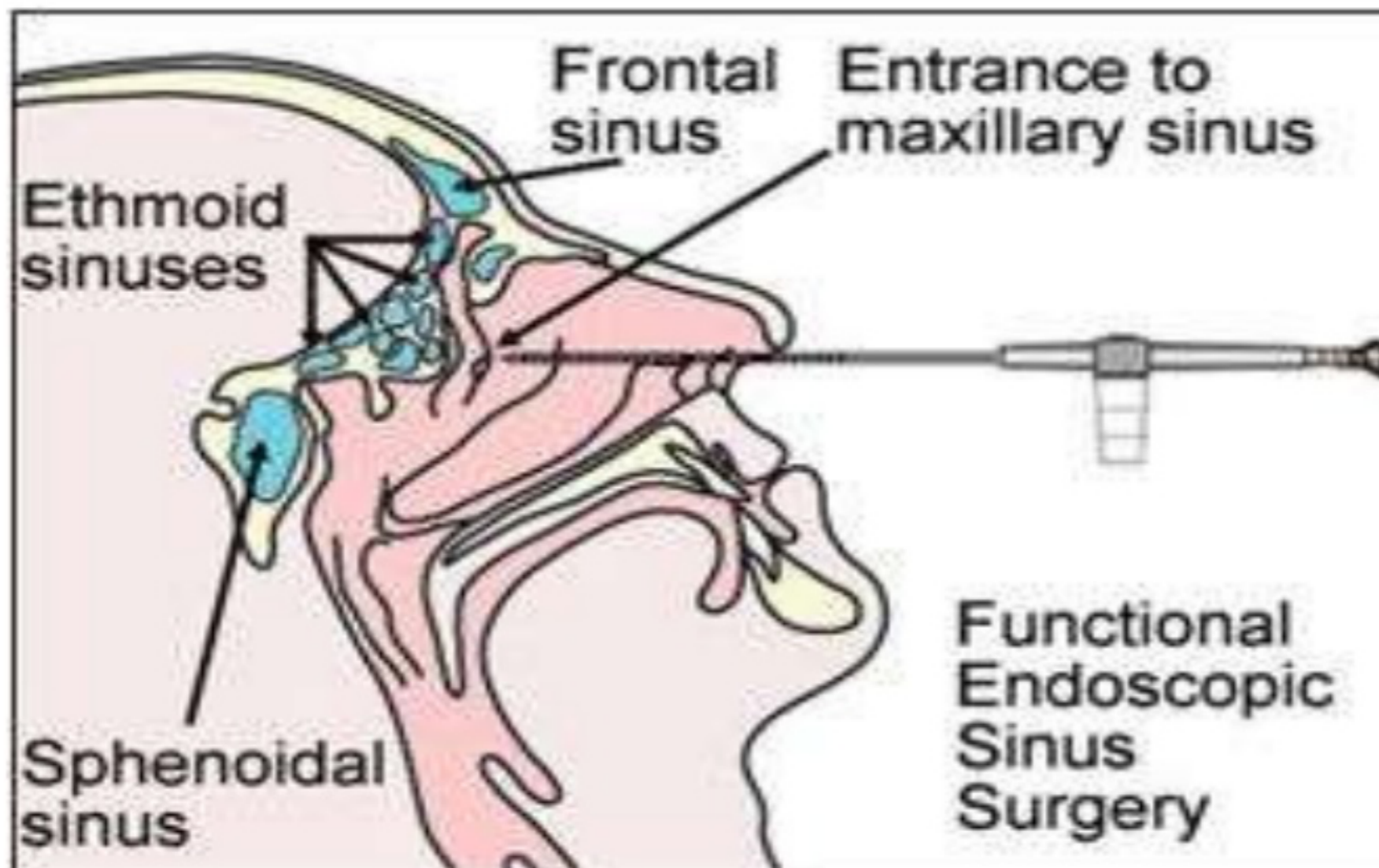
## CHRONIC ETHMOID SINUSITIS

- ⊙ Intranasal ethmoidectomy.
- ⊙ External ethmoidectomy.

## CHRONIC SPHENOID SINUSITIS

- ⊙ Sphenoidotomy.

**FESS HAS NOW REPLACED CONVENTIONAL SURGERIES.**



# COMPLICATIONS

- **Pansinusitis**
- **Middle ear infection**
- **Pharyngitis, Laryngitis and tracheobronchitis**
- **Periorbital and orbital cellulitis**
- **Osteomyelitis of the axilla**
- **Aggravation of asthma**
- **Mucocele or pyocele**