



PARANASAL SINUSES

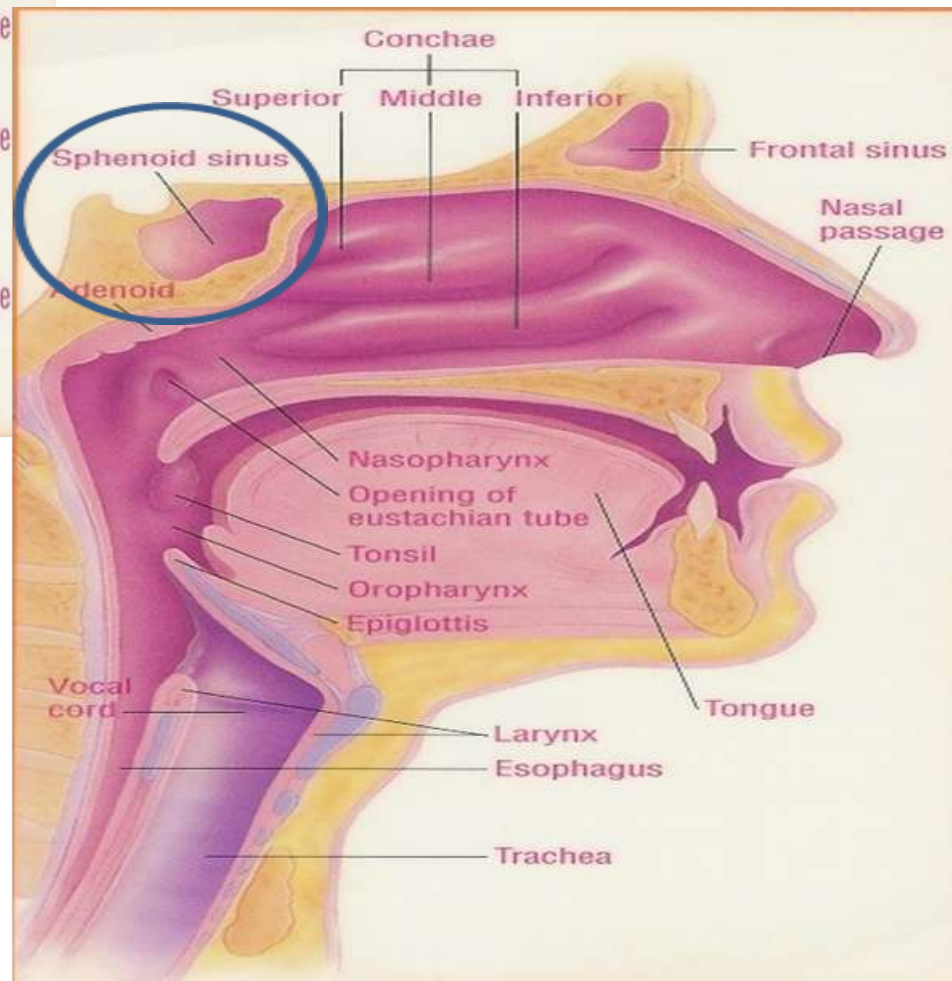
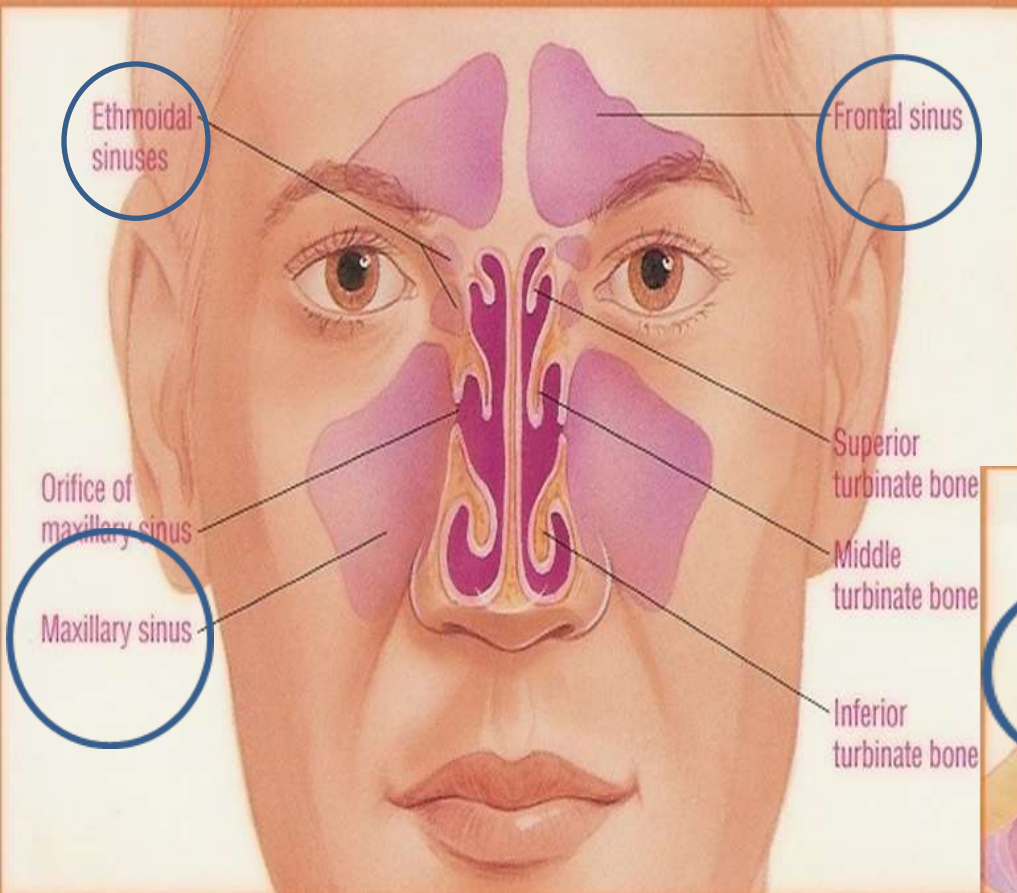
Dr. Swati Gupta
Associate professor
Department of Oral
Medicine and Radiology



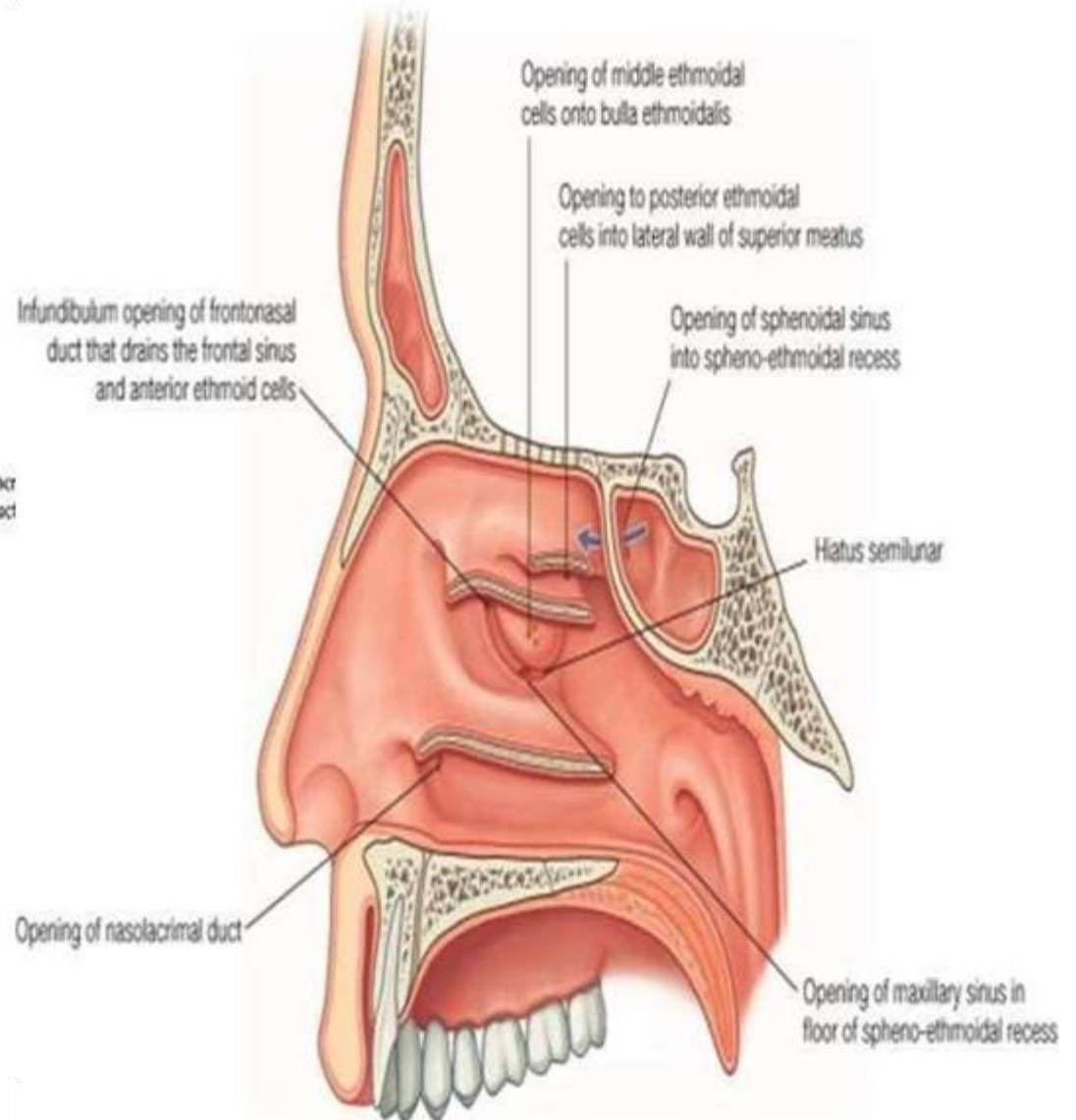
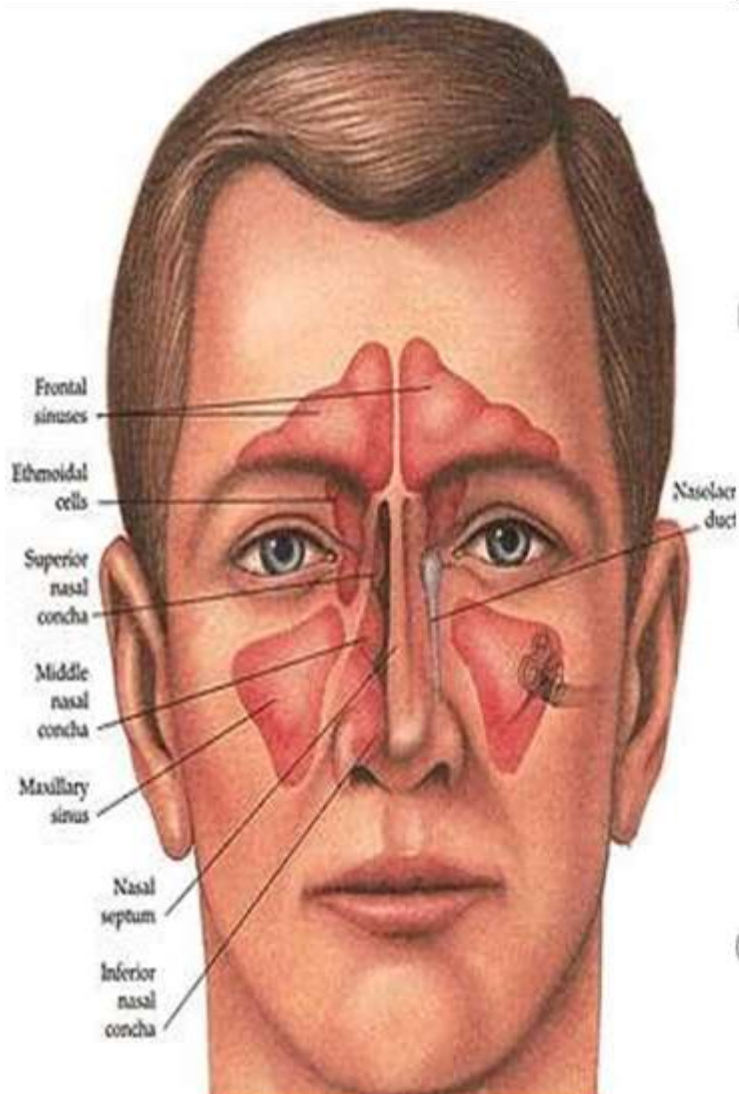


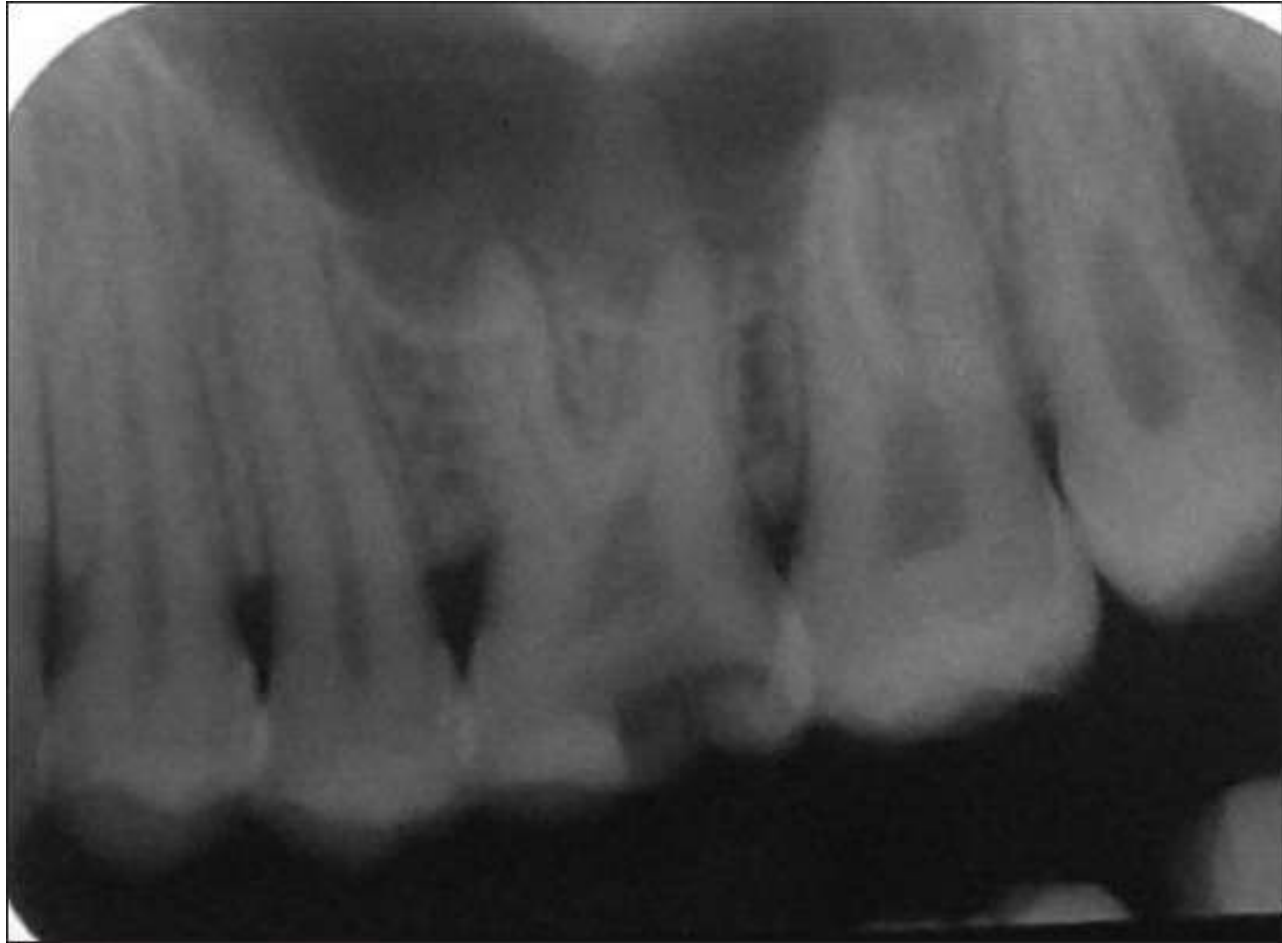
Purpose of sinuses

- Humidifying and warming inspired air
- Regulation of intranasal pressure
- Increasing surface area for olfaction
- Lightening the skull
- Resonance
- Absorbing shock
- Contribute to facial growth



PARANASAL SINUSES

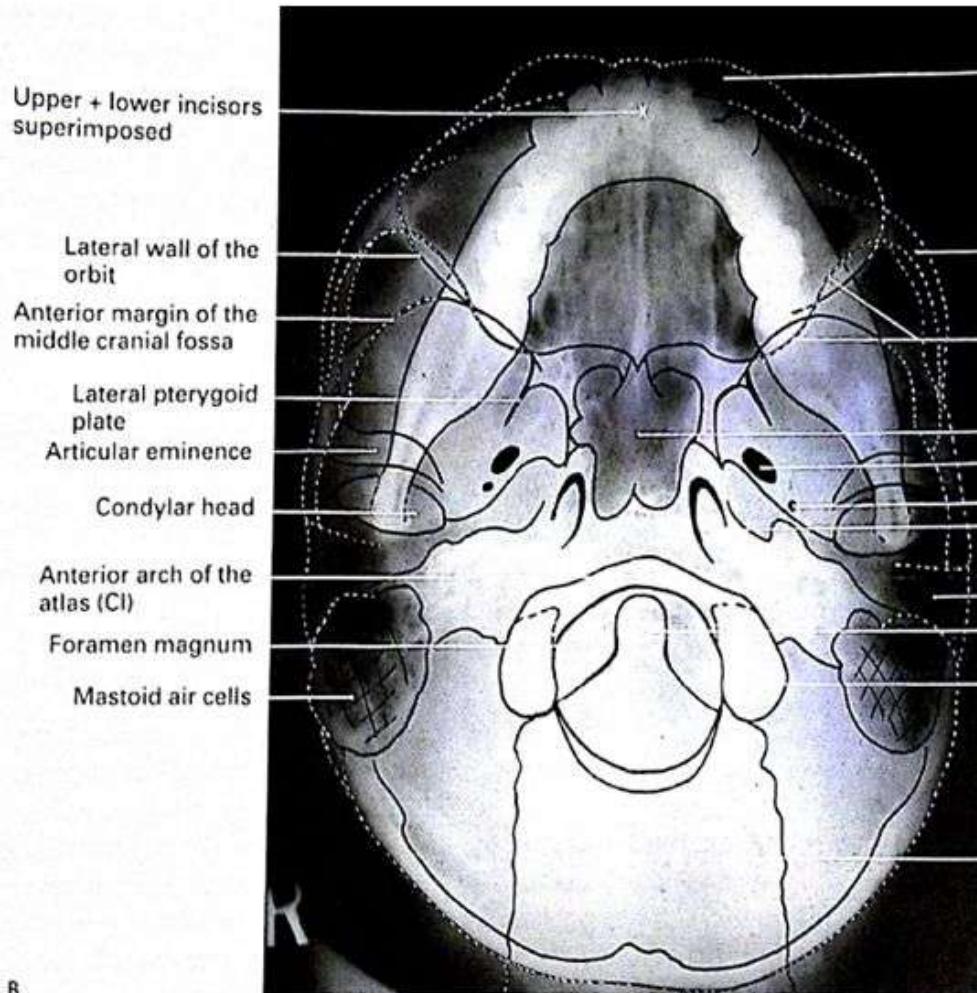
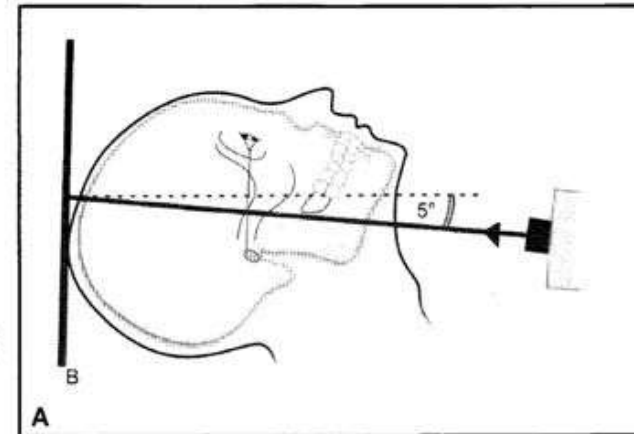








Submentovertex



Frontal si

Zygomatic arch

Postero-lateral wall of the maxillary antrum

Sphenoidal sinus

Foramen ovale

Foramen spinosum

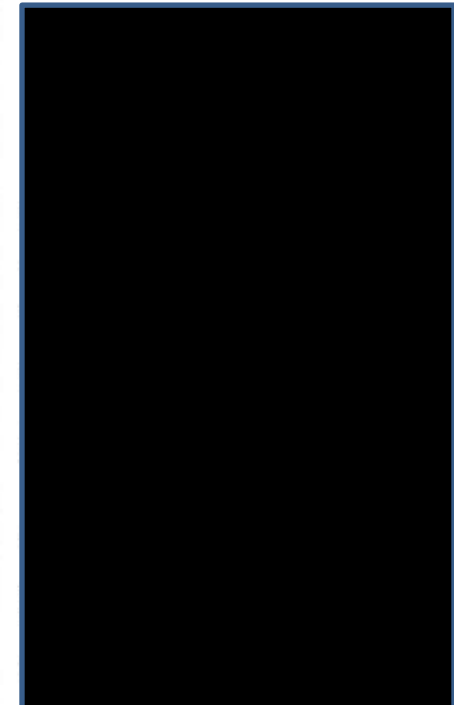
Foramen lacerum

Auditory canal

Odontoid peg (C2)

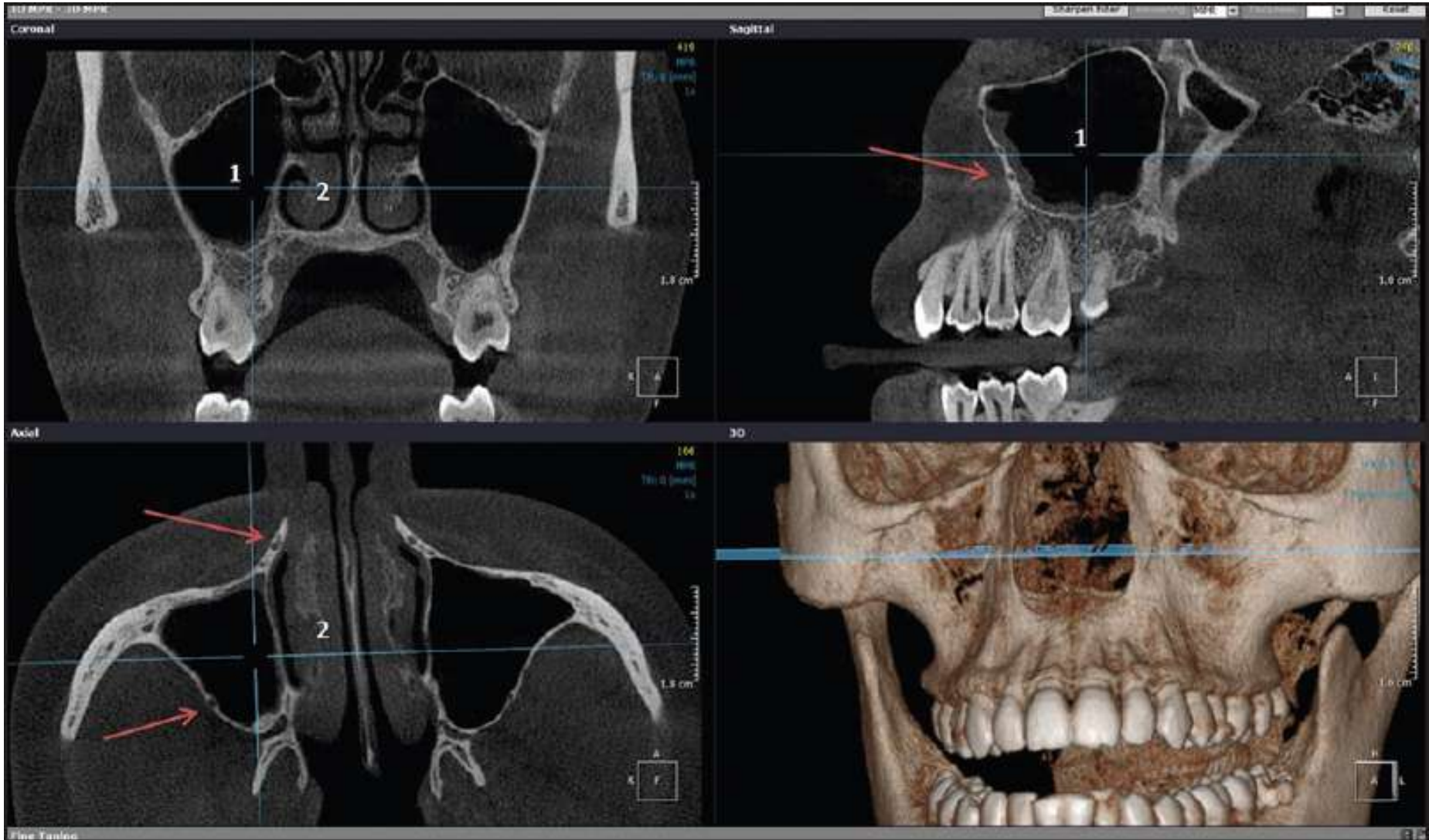
Occipital condyle

Shadow of the cervical spine







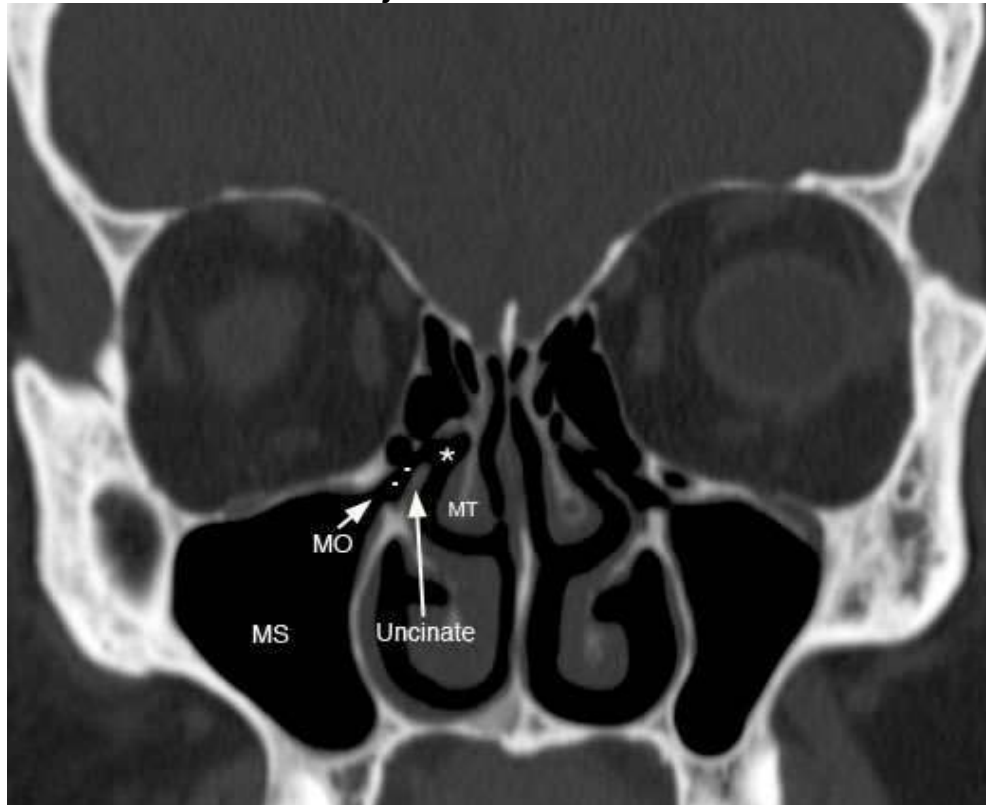


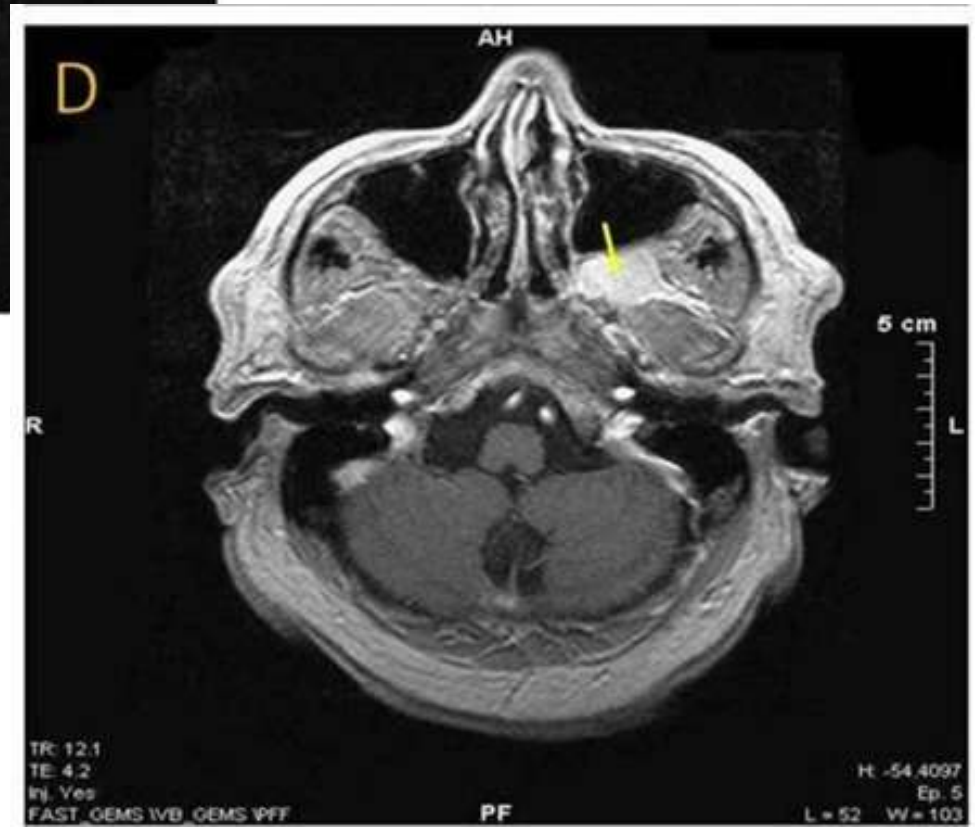
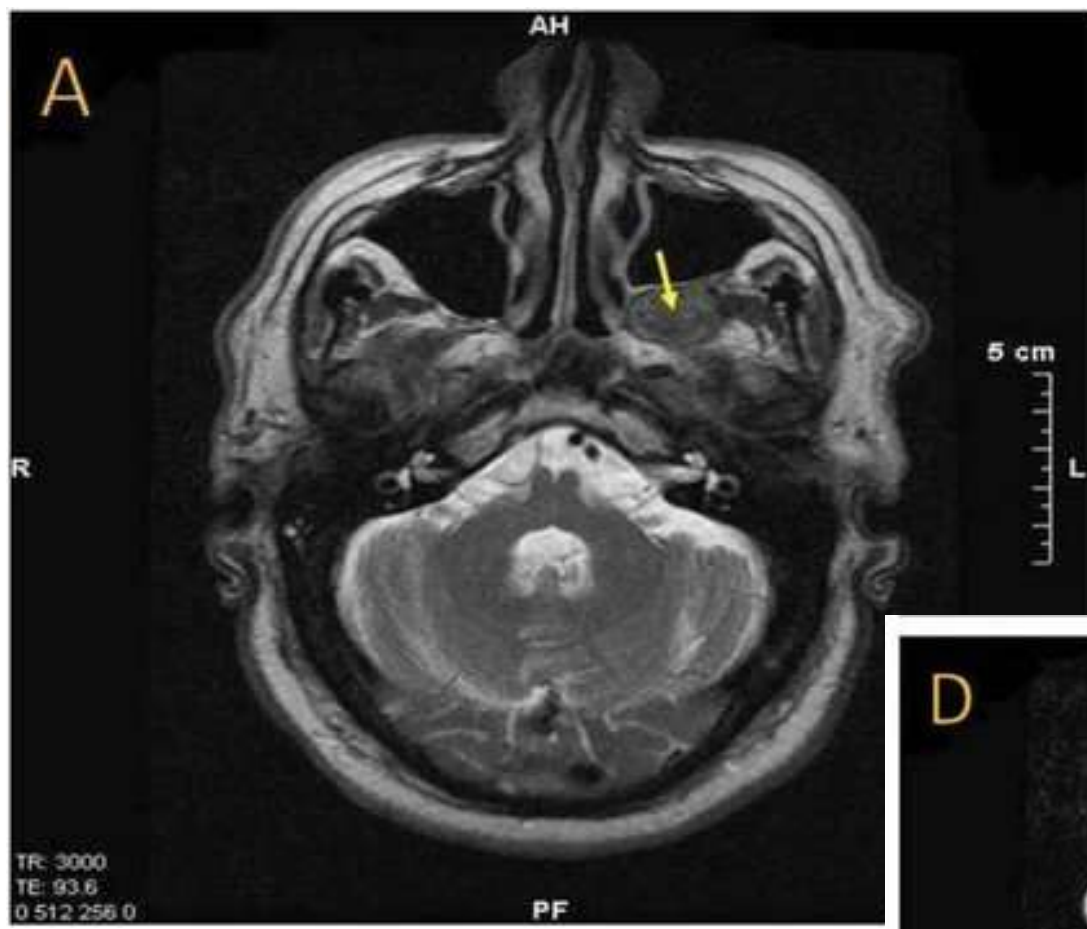




THE OSTEOMEATAL COMPLEX

- Region where the frontal ,anterior and middle ethmoid and maxillary sinuses drain .
- Includes the fronto ethmoidal recess , unciniate process , hiatus semilunaris , ethmoid bulla , the maxillary infundibulum and ostium and the ethmoid infundibulum .
- Disease at the OMC is the major cause of recurrent acute/chronic sinusitis .





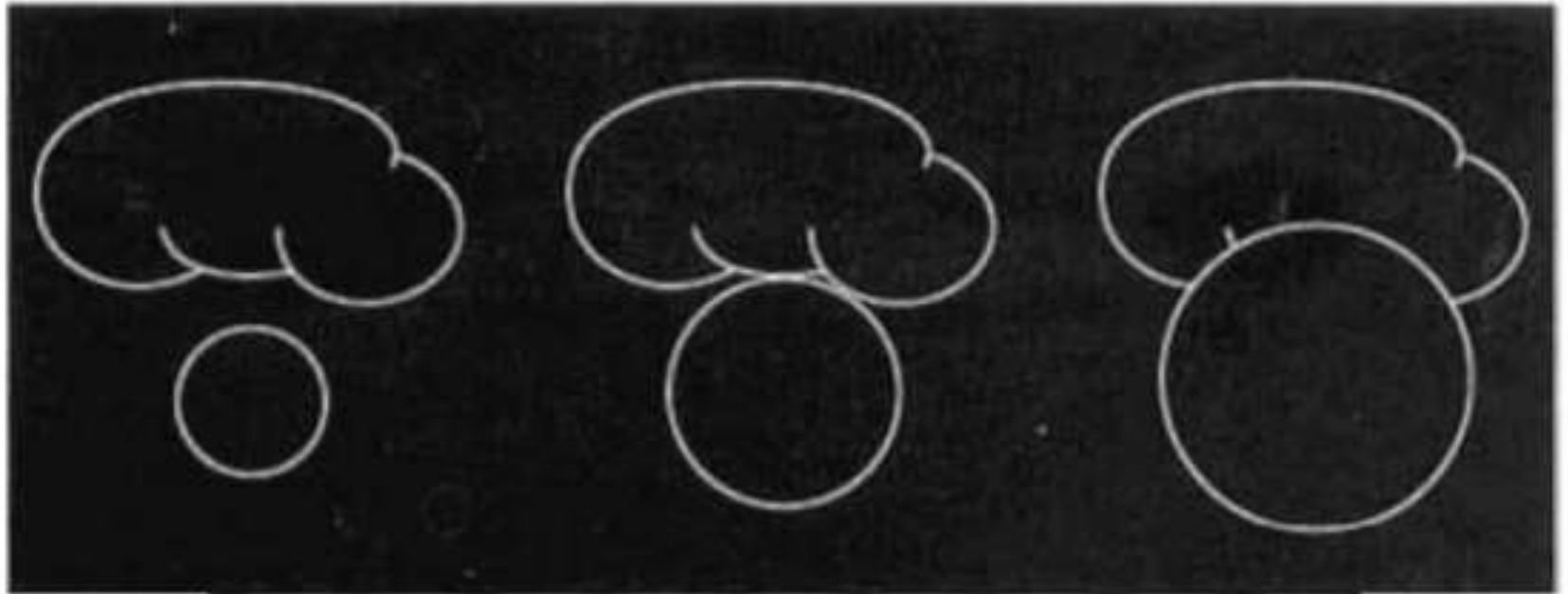
DISORDERS OF MAXILLARY SINUS



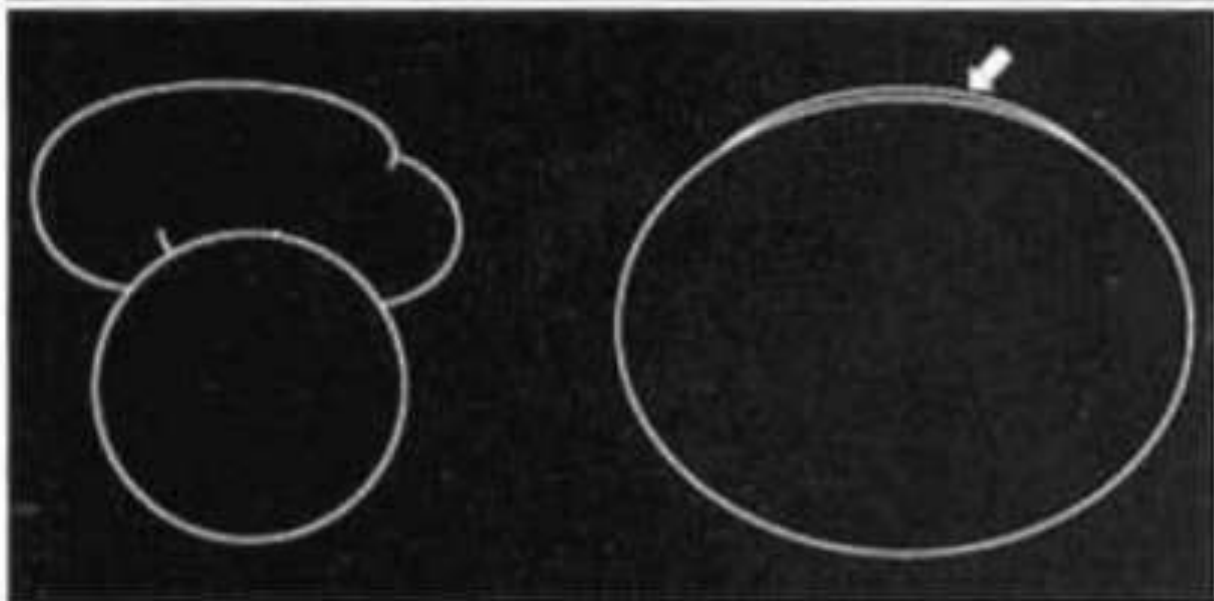
- **TRAUMATIC**-Fracture, OAF, Foreign body, haematoma, contusion
- **INFECTIOUS/INFLAMMATORY**
 - **Non-specific-Mucositis, sinusitis, Antral polyps, Empyema, Periostitis**
 - **Specific- fungal(actinomycosis,mucormycosis), bacterial(Tuberculosis, Wegner's granulomatosis)**
- **CYSTS**
 - **Intrinsic-retention pseudocyst, Mucocoele**
 - **Extrinsic-odontogenic (radicular, Dentigerous and keratocyst) and non odontogenic (Globulomaxillary, Traumatic, aneurysmal)**
- **NEOPLASMS**
 - **Benign**
 - **Intrinsic-Epithelial papilloma, Osteoma**
 - **Extrinsic-Ameloblastoma, adenoameloblastoma, odontome, CEOT**
 - **Malignant**
 - **Intrinsic-SCC, Adenocarcinoma, Ca of salivary gland origin, Sarcoma, melanoma, Lymphoma**
 - **Extrinsic- SCC, metastatic, Ca of salivary gland origin, Sarcoma, melanoma, Lymphoma**
- **METABOLIC AND ENDOCRINAL**- Hyperparathyroidism, fibrous Dysplasia, Paget's Disease
- **CALCIFICATIONS-ANTROLITH**
- **SYNDROMES**- Crouzon's, Treacher Collins, Binder's



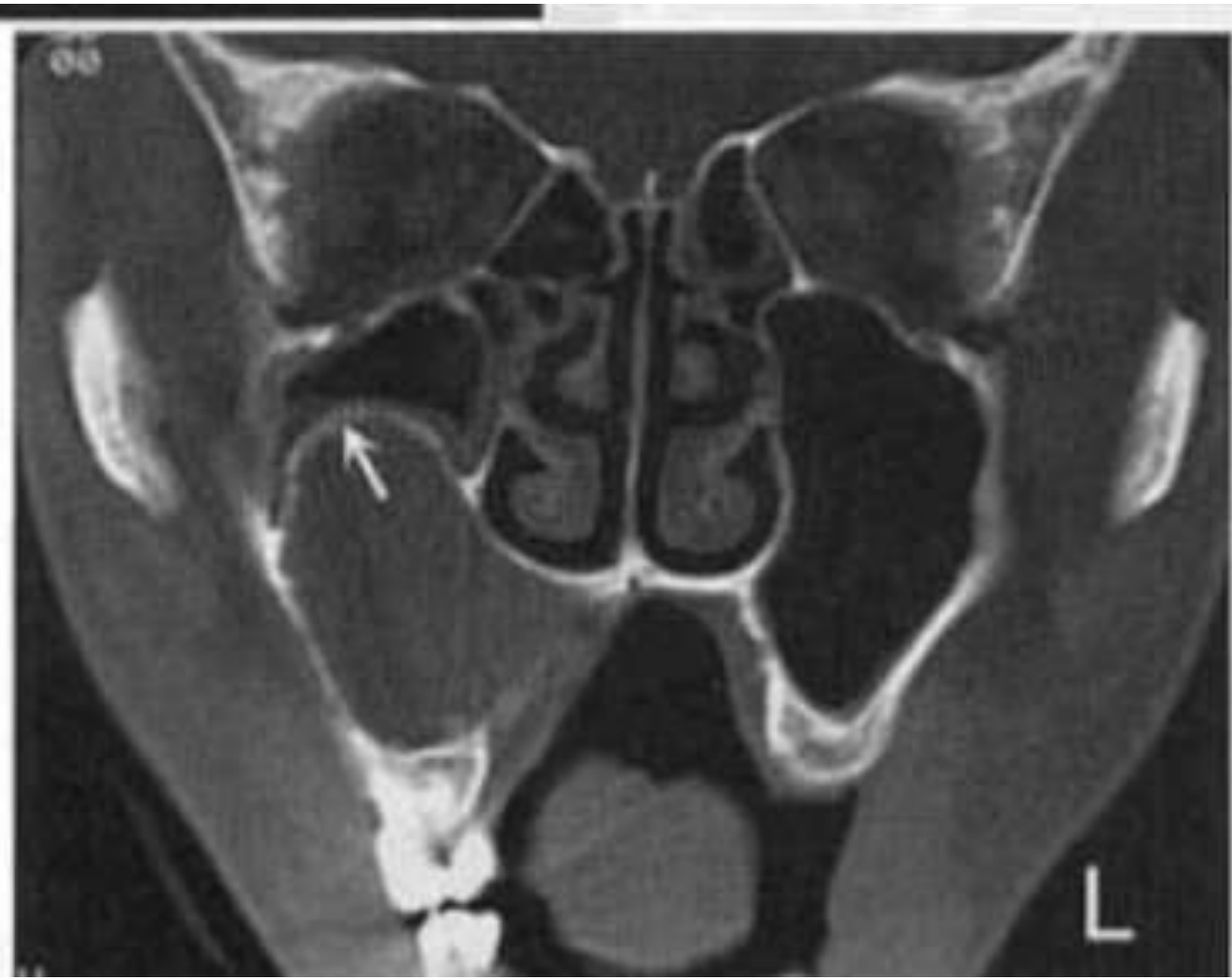
||



A



B



SINUSITIS

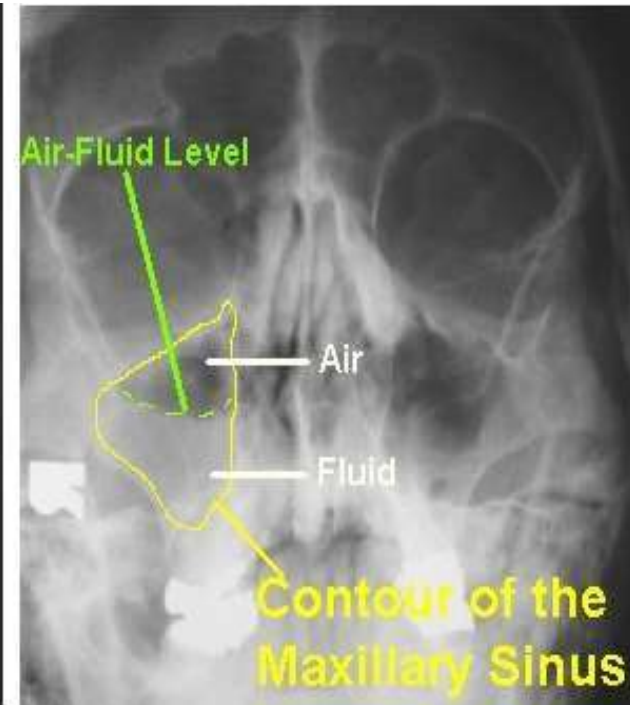
- ACUTE
- SUBACUTE
- CHRONIC

DIAGNOSIS:

□ Xray: WATER'S VIEW.

□ CT is preferred..

□ ANTERIOR NASAL ENDOSCOPY



TRANSILLUMINATION TEST.



TRANSILLUMINOSCOPE

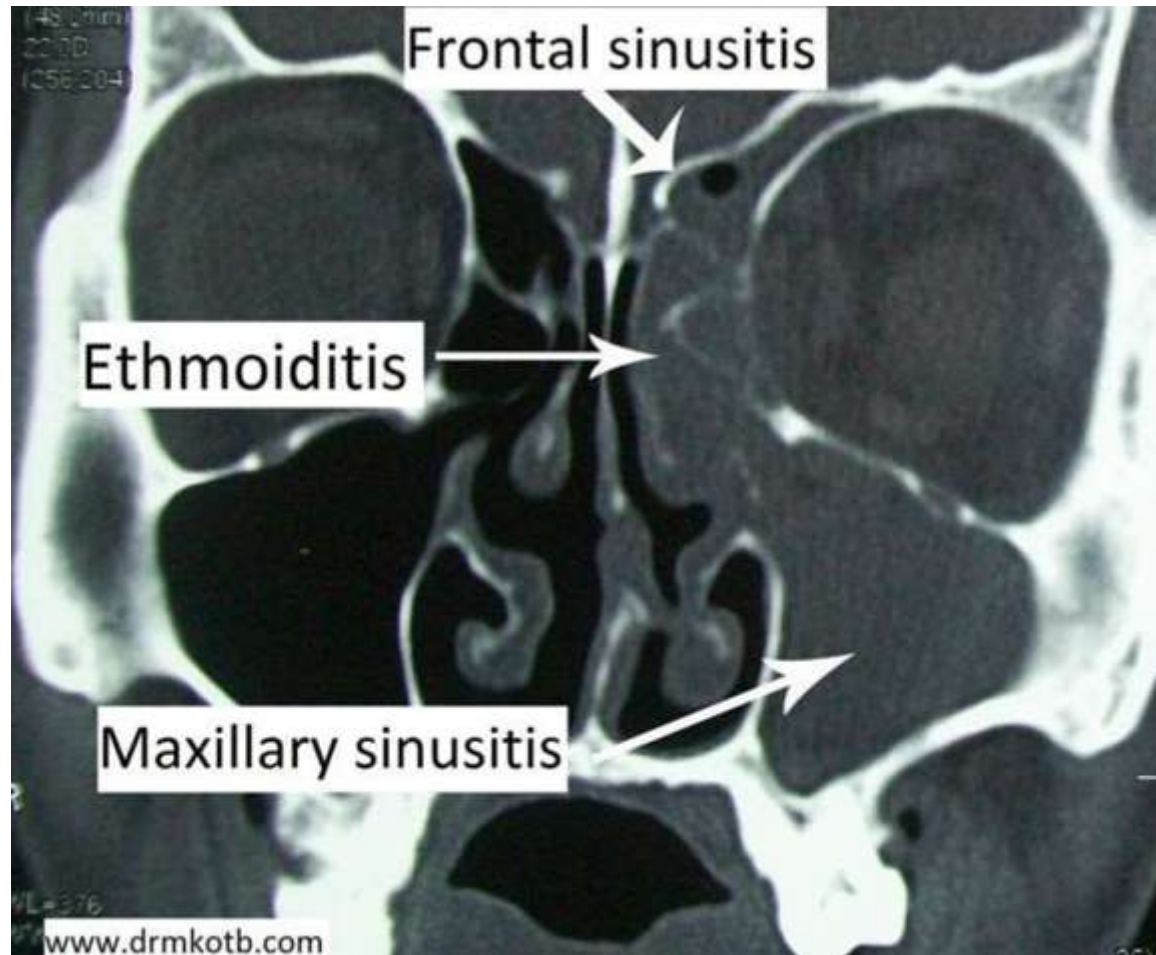


TRANSILLUMINATION OF MAXILLARY SINUS

MANAGEMENT OF SINUSITIS

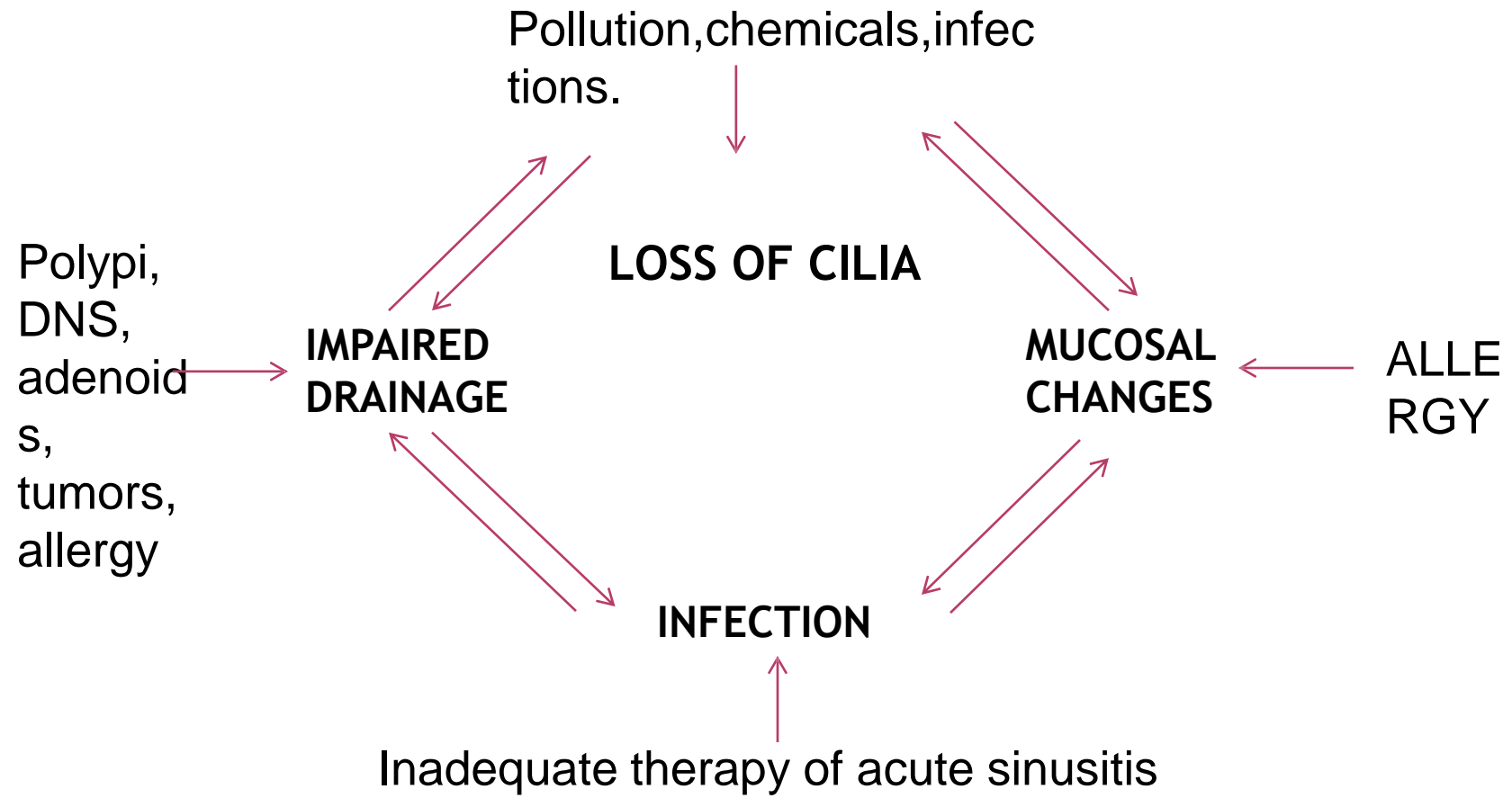
- Antimicrobial drugs
(ampicillin/amoxicillin/erythromycin)
- Nasal decongestant drops (0.1% oxy or xylometazoline).
- Steam inhalation.
- Analgesics.
- Hot fomentation.
- SURGICAL- Antral lavage

PANSINUSITIS



CHRONIC SINUSITIS

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



DIAGNOSIS:



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



**NORMAL
SINUSES**



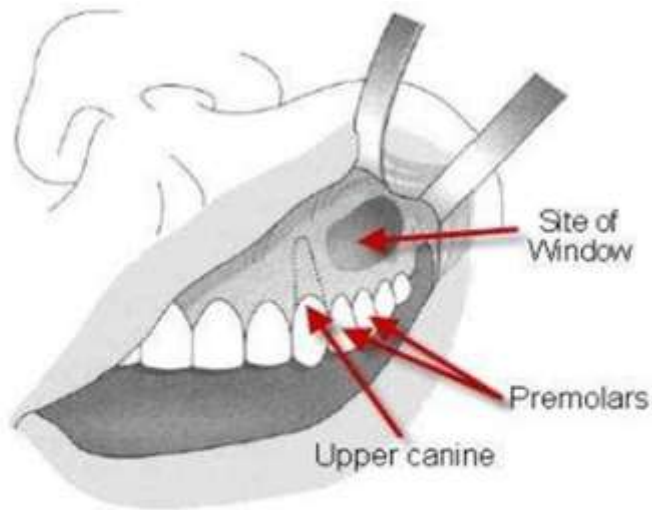
**SINUSITIS
(SEE THE
BLOCKED
AREAS?)**

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 MANAGEMENT

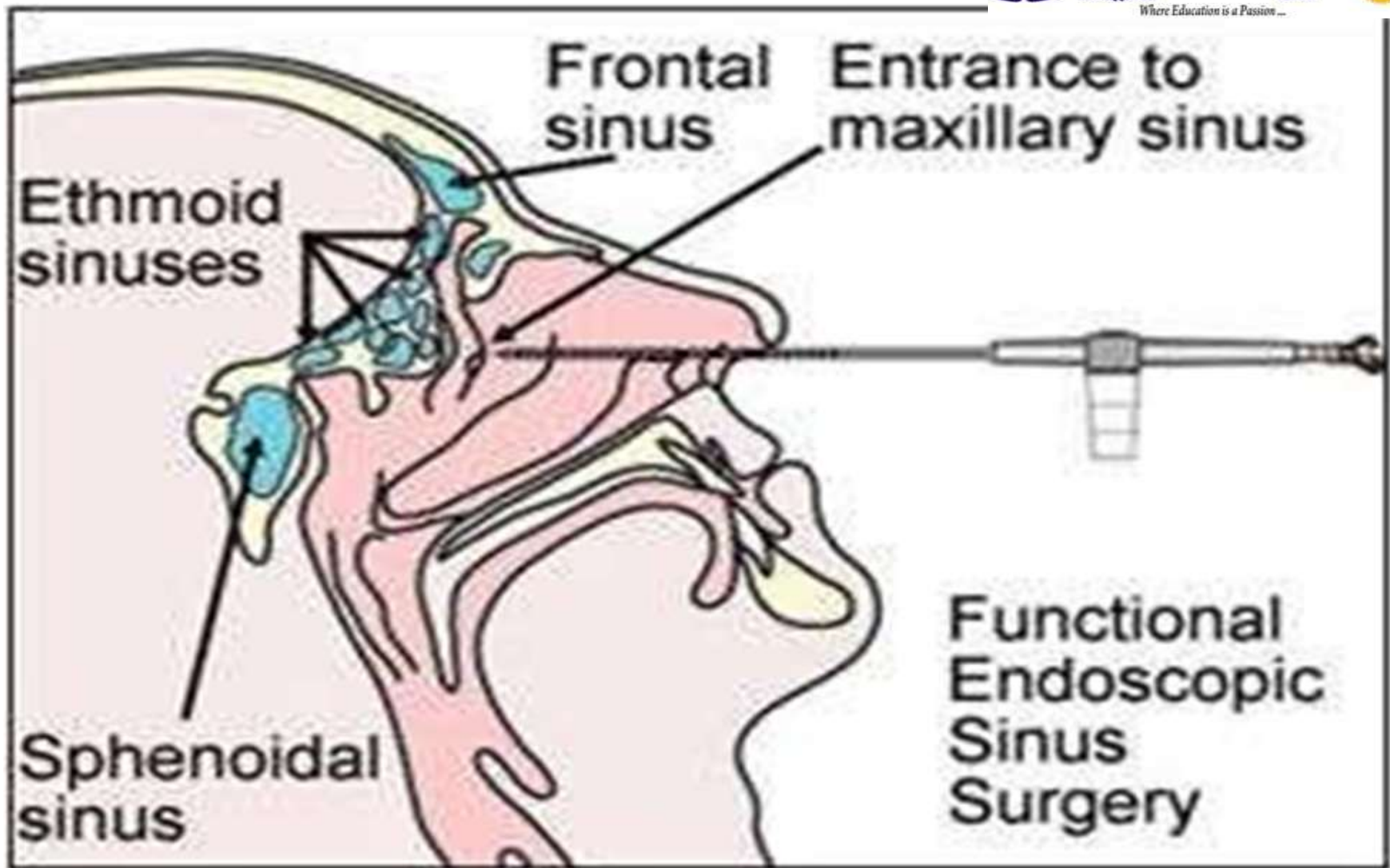
- Antral puncture and irrigation.
- Intranasal antrostomy.
- Caldwell-luc operation.



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



Nasal antrostomy



MUCOSITIS



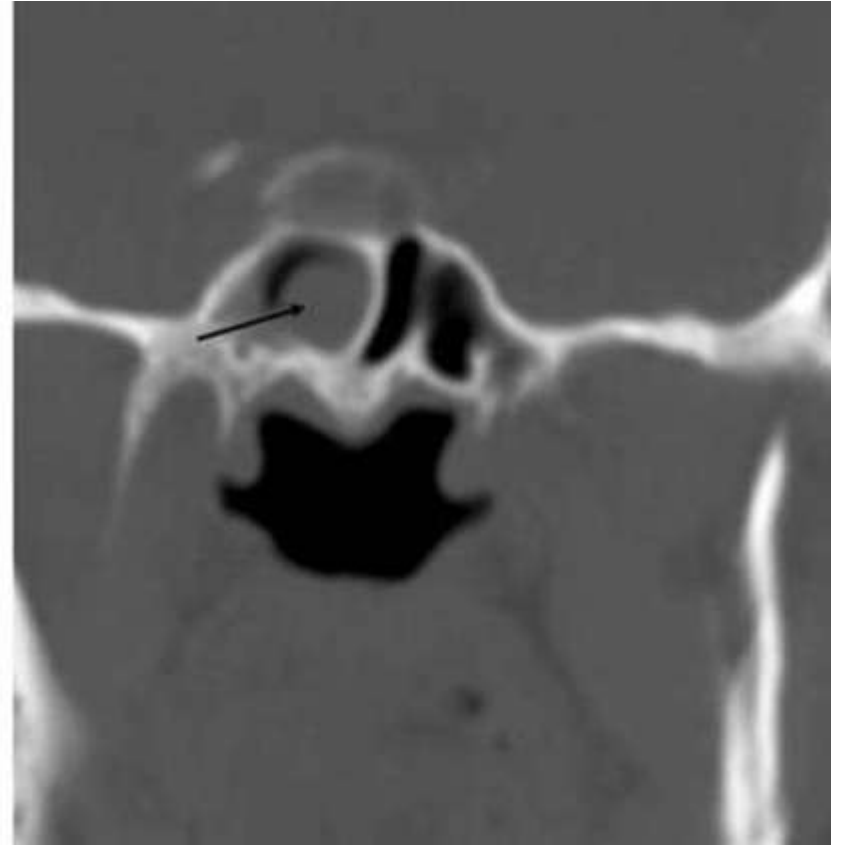
Periostitis



Mucous Retention Pseudocyst



POLYPS



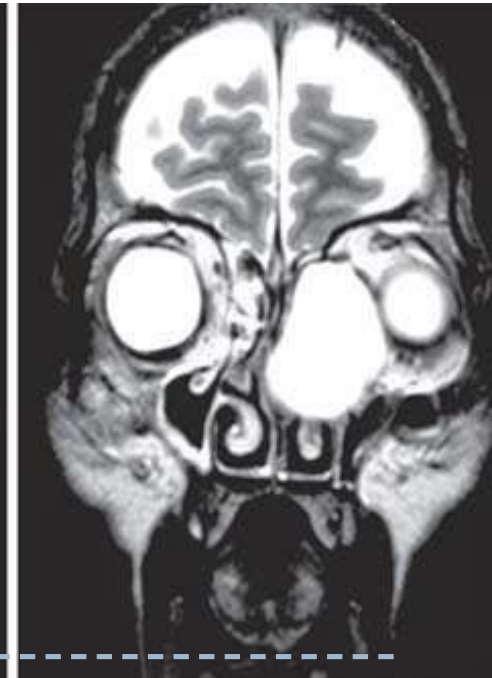


MUCOCELE

A left sided ethmoidal mucocele (A) encroaching on the left orbit.

Left globe in proptosed.

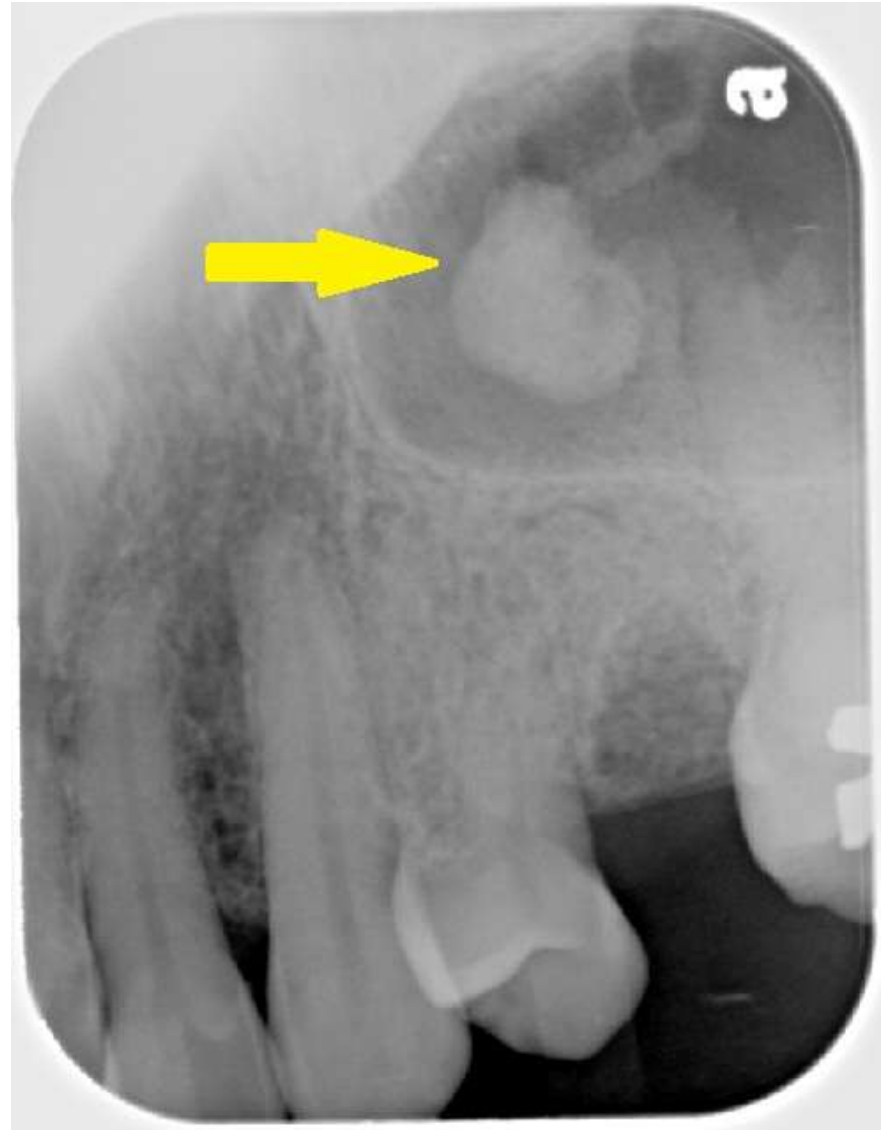
T2W MR axial and coronal sections (B) of the same patient showing **hyperintense fluid contents of the mucocele**

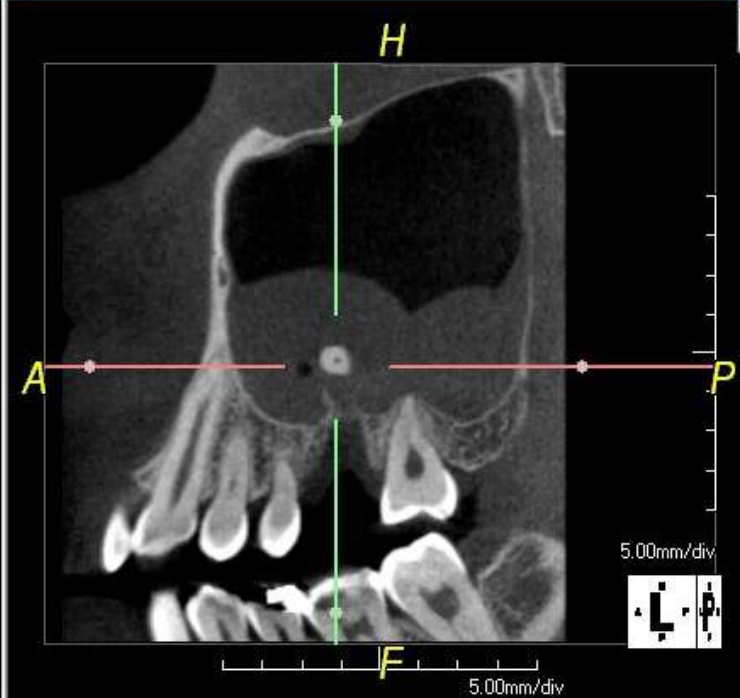
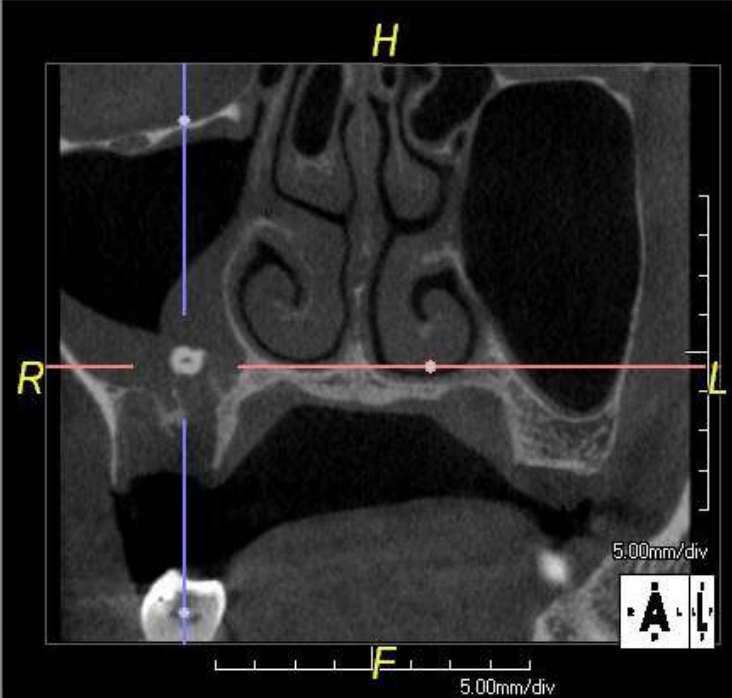
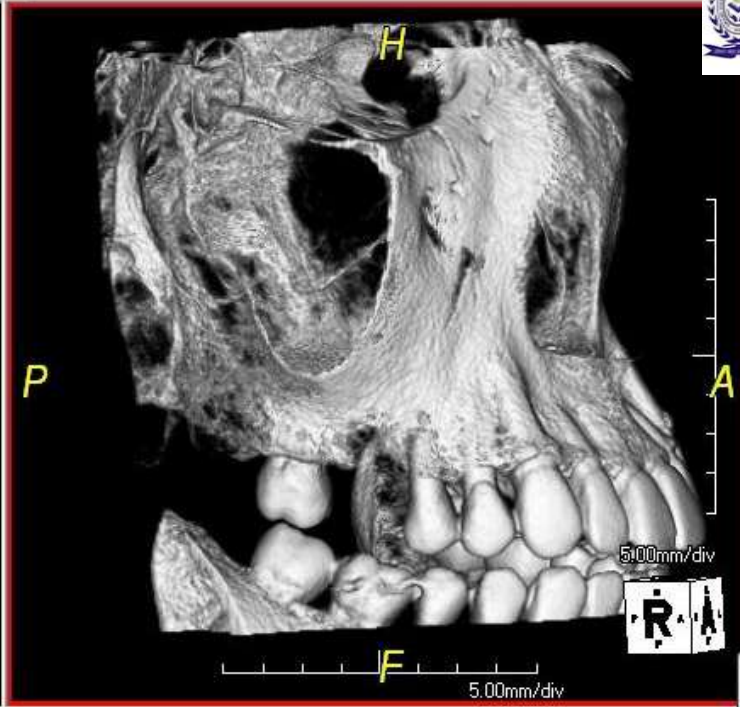
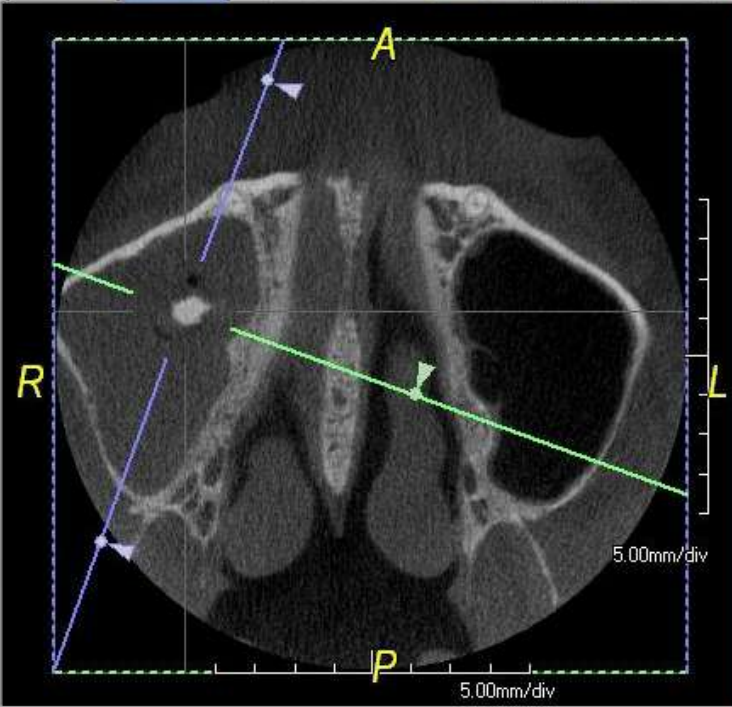


OSTEOMA



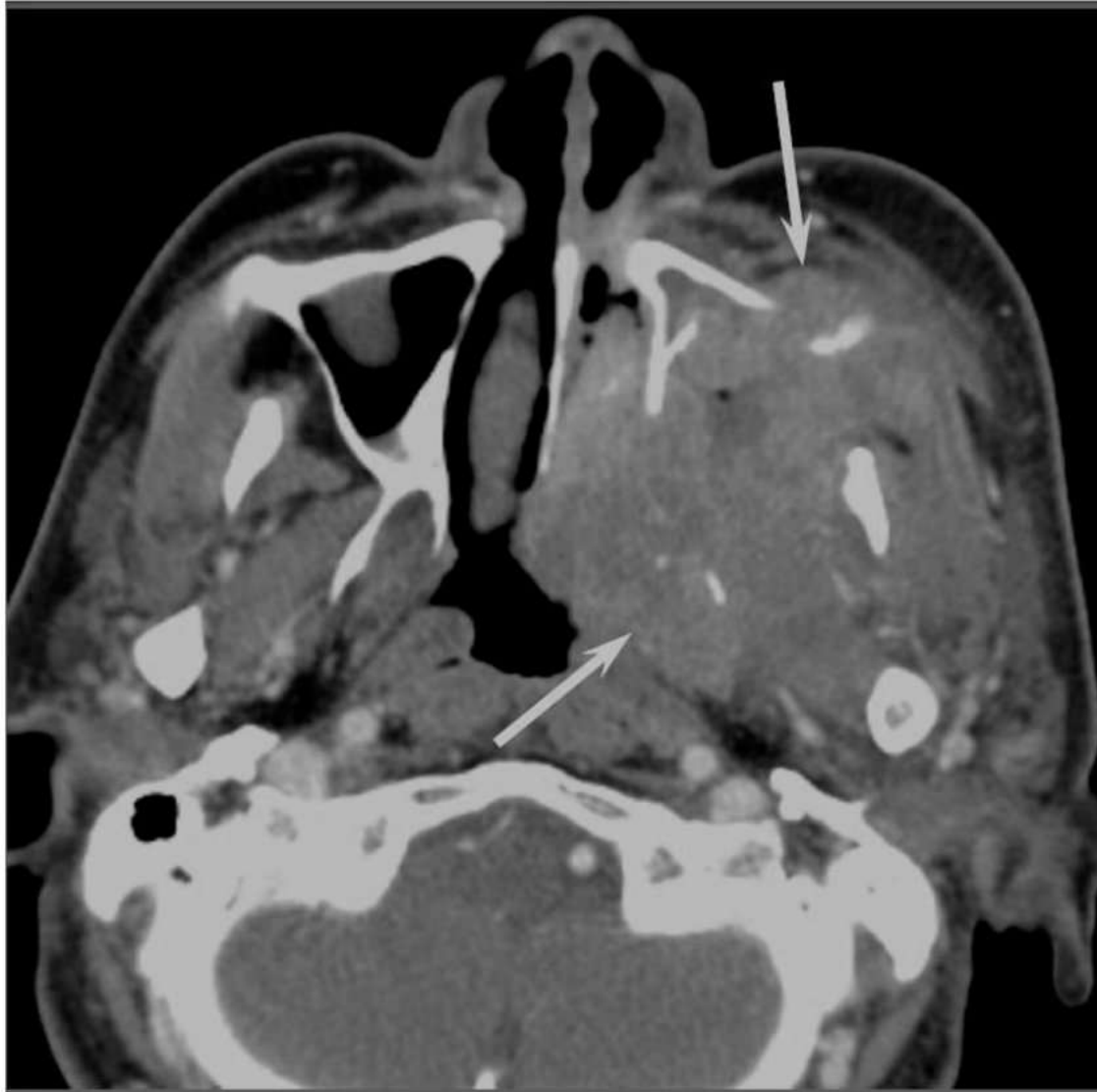
ANTROLITH



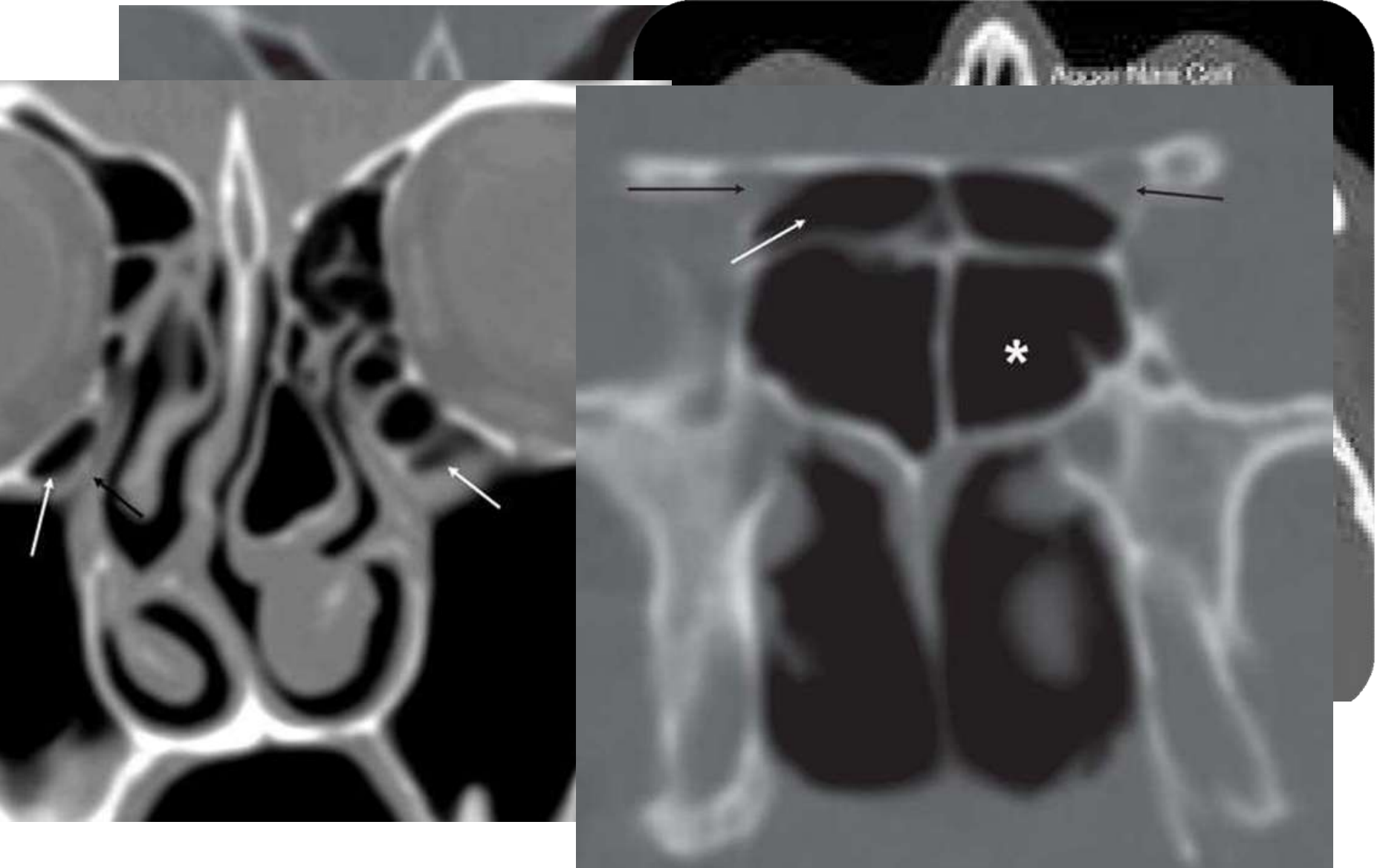


ROOT
PIECE IN
SINUS

SCC OF MAXILLARY SINUS



ANATOMICAL VARIANTS



THANK YOU