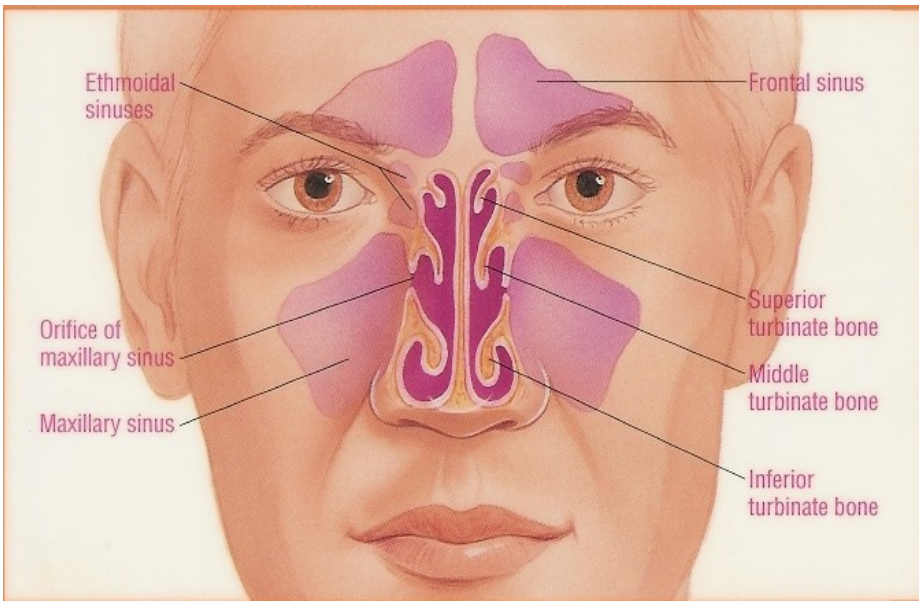
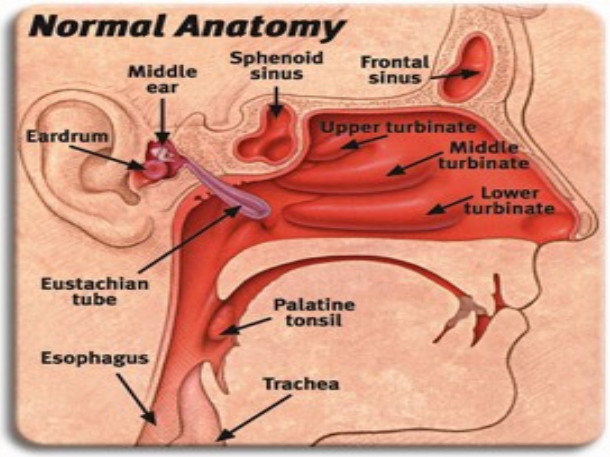
Sinusitis



WHAT`S SINUSITIS?



- **An acute inflammatory process involving one or more of the paranasal sinuses.**
- A complication of 5%-10% of URIs in children.
- Persistence of URI symptoms >10 days without improvement.
- Maxillary and ethmoid sinuses are most frequently involved

Acute sinusitis

Causes:

1.Acute infective rhinitis.
2.Swimming & diving .
3.Dental extraction & infection.
4.Fractures involving sinus.
5.Barotrauma.

Predisposing factors:

a.Local:

Nasal obstruction.
Sinus meatus obstruction.
Neighboring infection.
Previous infection.

b.General:

Debilitation & immune deficiency
Mucociliary disorders (cystic fibrosis)
Irritating atmospheric conditions.

Bacteriology:

Usually mixed & preceded by viral infection
*Strep. pneumonia,Staph.aureus ,Moraxella catarrhalis
*Kleb. ,E.coli .
*Anaerobic strep. in dental origin.

Pathophysiology:

- With inflammation, the mucosal lining of the sinuses produce mucoid drainage. Bacteria invade and pus accumulates inside the sinus cavities.
- Postnasal drainage causes obstruction of nasal passages and an inflamed throat.
- If the sinus orifices are blocked by swollen mucosal lining, the pus cannot enter the nose and builds up pressure inside the sinus cavities
- **Acute Sinusitis – respiratory symptoms last longer than 10 days but less than 30 days.**
- **Subacute sinusitis – respiratory symptoms persist longer than 30 days without improvement.**
- **Chronic sinusitis – respiratory symptoms last longer than 120 days.**

CLINICAL PRESENTATION:

1.Preceding URTI.
2.Constitutional symptoms.(headache, fatigue, fever)
3.Nasal obstruction.
4.Nasal discharge ,postnasal drip & halitosis
5.Sever facial pain over sinus , increases by bending or coughing.
6.Swelling &tenderness over affected sinus.

INVESTIGATIONS:

1.Endoscopical examinations.
2.Radiological examinations. X-ray sinuses ,CT scan, MRI .

DIFFERENTIAL DIAGNOSIS:

1.Dental pain.
2.Migraine.
3.Trigeminal neuralgia.
4.Neoplasms of sinuses.
5.Infections eg.erysipelas & H.zoster.
6.Temporal arteritis, Angioneurotic oedema & Insect bite.

TREATMENT.:

1.Tt. of infections.
2.Tt. of pain.
3. Decongestant
4. Irrigation.

Antimicrobials-treat for 10-14 days, depending upon severity, with one of the following:

- Amoxicillin:20-40mg/kg/d in 3 divided doses(>20kg, 250mg tid)
- Augmentin:25-45mg/kg/d in 2 divided doses(>20kg, 400mg q12) Use chewable or suspension if child is less than 40kg.
- Codeine – for severe pain
- Rhinocort nasal spray – 2 sprays in each nostril every 12 hours for children over 6 years of age.

- Acetaminophen or ibuprofen to relieve pain
- Decongestants
- Antihistamines
- Nasal saline

NON-PHARMACOLOGICAL TREATMENT:

- Humidifier to relieve the drying of mucous membrane associated with mouth breathing
- Increase oral fluid intake
- Saline irrigation of the nostrils
- Moist heat over affected sinus
- Prolonged shower to help promote drainage

CHRONIC SINUSITIS

PREDISPOSING FACTORS:

1.VMR ,AR.
2.Smoking & other pollutions.
3.Nasal polyposis.
4.Indocrine disorder e.g. Myxedema.
5.Cong.mucociliary disorders.

BACTERIOLOGY:

Usually mixed
*Strep. Including some anaerobic.
*Pneumococci.
*Proteus ,Pseudomonus &E.colli

CLINICAL FEATURES:

Same as acute but lesser degree
*Nasal &post nasal discharge of mucoid or purulent.
*Headache; heavy or dull ache.
*Anosmia or cacosmia.
*Less sever constitutional symptoms.

PRINCIPLES OF TT.:

*Decongestants; avoid use topical decongestants for a long time, systemic may be of value.

*Steroid may of benefit (systemic or local).

*Systemic antibiotics.

*Surgical drainage .

COMPLICATIONS OF SINUSITIS:

the orbit is the most common complication of acute sinusitis in children

MODE OF SPREAD:

1.Direct;through bony wall.
2.Venous.
3.Lymphatics.
4.Via perineural space of Olfactory n.to subarachnoid space.

TYPES:

1.Extracranial cx.s

a.Osteomayelitis:

Rare ,usually of frontal sinus, increases in young adults.
Forehead oedema (Pott's puffy tumor).

b. orbital cx.s:

Rare but more in children due to ethmoiditis

c.Others:

1.Infection of nasopharynx.
2.Lateral pharyngitis & Tonsillitis.
3.Otitis media.
4.Laryngotracheitis.
5.Bronchitis.
6.Association with bronchiectasis.
7.Association with asthma.
8.Polyarteritis,Tenosynovitis.

2.INTRACRANIAL CX.S:

a. Meningitis +/- extradural or subdural abscesses.
b. Cavernous sinus thrombosis.
c. Brain lesion; according to affected sinus;
    1.Frontal lobe abscess.(frontal).
    2.Diffuse supp. Meningitis near cribriform plate(ethmoid).
    3.Diffuse meningitis+CSF (sphenoid).
    4.Max.sinusitis rarely causes ICCx.

*Thank you, and good luck ^^*