

Chronic Sinusitis

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Definition: It is an inflammation of the mucosal lining of the paranasal sinuses for more than 3 months; recently the term used is chronic rhinosinusitis since the mucosal lining is the same for both the nose and paranasal sinuses.

Classification of chronic sinusitis:

A) Specific as tuberculosis, syphilis, and fungal infections

B) Non-specific which is subdivided into 2 forms:

1) Simple infective sinusitis

Usually follow single or repeated attacks of acute sinusitis that's results from infective rhinitis.

2) Mixed infective and non-infective sinusitis:

Secondary consequences usually results from obstruction of the sinus ostium that opens to the nasal cavity, such as:

1. Allergic rhinitis.
2. Vasomotor rhinitis.
3. Nasal polyposis.
4. Structural nasal abnormalities as septal deformity.
5. Congenital mucocilliary disorders as primary cilliary dyskinesia
6. Metabolic derangements (aspirin sensitivity).

Pathology:

There is mucosal edema leading to gross thickening of mucous membrane that lining the affected sinuses with chronic inflammatory cellular infiltration, fibrosis of submucosa, and mucosal polyposis. Usually it caused by mixed micro-organism such as staph aureus, Pseudomonas aeruginosa, streptococci , proteus and E-coli.

Clinical presentation**Symptoms**

- Thick, discolored discharge from the nose (Rhinorrhea)
- Drainage down the back of the throat (postnasal drip) that's lead to chronic pharyngitis with halitosis.
- Nasal obstruction
- Headache
- Rarely there is pain, tenderness.
- Reduced sense of smell and taste.
- Cough and Eustachian obstruction are common secondary effects.
- Constitutional symptoms are usually mild.

Signs: by anterior and nasal endoscopy shows usually non-specific finding, such as nasal polyps, septal deviation, signs of allergic rhinitis or vasomotor rhinitis (intrinsic rhinitis), postnasal drip, granular pharyngitis, also halitosis, and features of Eustachian obstruction.

Investigations:

1. Nasal endoscopy

- a. To evaluate the normal anatomy
- b. To exclude the presence of anatomic abnormalities as reversed middle turbinate
- c. Looking for pathologies as polyps, turbinate hypertrophy
- d. To take samples for culture and sensitivity

2. CT scan is the gold standard investigation with the following aims:

- a. To prove the diagnosis
- b. Looking for predisposing factors (anatomical variation or pathological findings)
- c. To address the anatomy (if surgery is decided)
- d. To exclude the presence of complications (especially orbital and intracranial complications).

Treatment:

Medical: although it is chronic disease medical treatment should always be given for 4-6 weeks, this will include:

- .1 Antibiotics
- .2 Steroids nasal spray
- .3 Antihistamines especially when there is allergy.
- .4 Analgesic usually not needed.

Surgical treatment is indicated when there is failure of medical treatment, these are done according to the sinus involved, and these may include:

1. Intranasal antrostomy.
2. Caldwell – Luc operation.
3. Internal and external ethmoidectomy.
4. Internal and external fronto – ethmoidectomy
5. Sphenoid surgery.
6. Functional endoscopic sinus surgery (FESS). " Gold standard operation"

Aims of "FESS":

1. Remove diseased mucosa, polyps, and widen sinus ostium.
2. Restore sinus ventilation.
3. Restore the normal mucocilliary function.