Evaluation of Chronic Sinusitis

Paraclinical Evaluation
- **CT or MRI scanning**
  - Anatomic defects, tumors, fungi
- **Allergy testing**
  - Inhalants, fungi, foods
- **Sinus aspiration for cultures**
  - Bacterial
  - Fungal
- **Immunoglobulins**

Conditions Causing or Favoring Chronic Sinusitis
- Allergic and nonallergic rhinitis
- **Uncorrected anatomic conditions (mostly nasal)**
- Ciliary dyskinesia
- Cystic fibrosis
- Tumors
- Immunodeficiency disorders– IgA, IgM
- Granulomatous diseases

Sx (signs) of Chronic Sinusitis, the same as of acute sinusitis, but they or some of them last longer
- Nasal discharge
- Nasal congestion
- Headache
- **Facial pain (or prurit) or pressure**
- **Olfactory disturbance**
- Fever and halitosis (foul-smelling breath)
- Cough (worse when lying down, due to a persistent port-nasal drip)


Les signes qui sont souvent présents chez moi sont (j'en peux faire un manuscrit):

1. **l’encéphalisation nasale gauche** ; il est constant et est créé par ce cornet hypertrophie qui empêche une bonne aération des sinus craniens gauches
2. la décharge nasale sous forme
   a) de croutes sèches purulentes (brunâtres) ou sanguinolentes (noirâtres)
   b) ou d’égouttement liquide post-nasal
3. **la toux associée** à la décharge post-nasale due à la présence de liquide dans la gorge (oro-pharynx et laryngo-pharynx) ou à l’irritation de celle-ci par ce liquide ou par la réponse nerveuse au blocage des voies nasale gauches (meats des cornets nasaux où l'air respire est humidifié et rechauffé et voie nasale directe communiquant avec l'extérieur par les narines nasales)

4. pas vraiment des maux de tête, mais la **douleur frontale**, au niveau des sinus frontaux et de la jonction de la zone frontal et pariétale; cette douleur n'est pas aigue, mais sourde et peut être mise en evidence à la palpation

5. **l'éternuement** due à l'irritation de la muqueuse nasale

6. la **sensation de la présence de liquide dans l'oreille gauche**

7. et la **douleur sous forme de grattage** (prurit) dans cette oreille

8. la raideur et **contracture de la nuque** par action probablement réflexe

9. la **contracture du côté gauche du corps** qui peut aussi avoir une composante sinusale, gauche

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**Evolution of Chronic Sinusitis**

- Symptoms present **longer than 8 weeks or 4/year in adults or 12 weeks or 6 episodes/year in children**
- Eosinophilic inflammation or chronic infection
- Associated with positive CT scans
- Poor (if any) response to antibiotics


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**Differentiating Sinusitis from Rhinitis**

<table>
<thead>
<tr>
<th>Sinusitis</th>
<th>Rhinitis</th>
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<tbody>
<tr>
<td>Nasal congestion</td>
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</tr>
<tr>
<td>Purulent rhinorrhea</td>
<td><strong>Rhinorrhea clear</strong></td>
</tr>
<tr>
<td><strong>Postnasal drip</strong></td>
<td>Runny nose</td>
</tr>
<tr>
<td>Headache</td>
<td>Itching, red eyes</td>
</tr>
</tbody>
</table>
Facial pain  
Nasal crease  
Anosmia  
Seasonal symptoms  
Cough, fever  

Acute Sinusitis Imposed on Chronic Sinusitis  
- Patients with chronic, low grade symptoms experience  
- increase in mucous flow, change in viscosity or color, or  
- secretions  
- Treated  
- New symptoms resolve but chronic symptoms continue  

Classification of Bacterial Sinusitis  
- **Acute bacterial sinusitis**- infection lasting 4 weeks, symptoms resolve completely (children 30 days)  
- **Subacute bacterial sinusitis**- infection lasting between 4 to12 weeks, yet resolves completely (children 30-90 days)  
- **Chronic sinusitis**- symptoms or at least some of them lasting more than 12 weeks (children >90 days)  
- Some guidelines add treatment failure + a positive imaging study  

Scope of Sinusitis in terms of Medical Expenses  
- Affects 30-35 million persons/year  
- 25 million office visits/year  
- Direct annual cost $2.4 billion and increasing  
- Added surgical costs: $1 billion  
- Third most common diagnosis for which antibiotics are prescribed  

Surgical Treatment and Span of Chronic Sinusitis  
Chronic sinusitis **may require surgical therapy** to resolve but can sometimes be successfully treated with **office based balloon sinuplasty (OBS)** under local anesthesia. In the cases the nasal component is the major obstacle it will **not be successful**. A study done in PubMed showed that **Microdebrider-assisted inferior turbinoplasty (MIT)** has the best functional outcome, even on **Radiofrequency turbinate reduction (RFTR)**:  
  ⇒ [https://www.google.com/search?q=microdebrider-assisted+inferior+turbinoplasty+(MAIT)&oq=microdebrider-assisted+inferior+turbinoplasty+(MAIT)]](https://www.google.com/search?q=microdebrider-assisted+inferior+turbinoplasty+(MAIT)&oq=microdebrider-assisted+inferior+turbinoplasty+(MAIT))&q=microdebrider-assisted+inferior+turbinoplasty+(MAIT)]]
As for the turbinate reduction with intranasal corticosteroids' spray, there is a proper technic that I will reproduce for you from MedlinePlus:

“Make sure you understand your dosing instructions. Make sure you apply only the prescribed number of sprays in each nostril. You may be asked to use the spray 1 - 2 times per day (I put in bold letters the less practical components you are used to).

1. Wash your hands.
2. Gently blow your nose to clear the passageway.
3. Shake the container several times.
5. **Block one nostril** closed with your finger.
6. Insert the nasal applicator into the other nostril.
7. Aim the spray **toward the outer wall** of the nostril.
8. **Inhale slowly** through the nose and **press the spray** applicator.
9. **Breathe out** and repeat to apply the prescribed number of sprays.
10. Repeat the steps for the other nostril.
11. **Avoid sneezing or blowing your nose right after spraying.**

**Side Effects**
Nasal corticosteroid sprays are considered safe for all adults. Specific types are safe for children (over age 2). Pregnant women can safely use nasal corticosteroids. Nasal corticosteroid sprays generally affect only the nasal passageway, where the medicine is deposited, and do not impact other parts of the body. They carry a low risk for widespread side effects unless the drug is used too much.

Side effects of nasal steroids may include (I put the more serious ones in bold letters):

1. Dryness, burning, stinging in the nasal passage. This can be helped by using the nasal corticosteroid after showering or placing your head over a steamy sink or steaming pot for 5 - 10 minutes.
2. Sneezing
3. Throat irritation
4. Headaches and nosebleed (uncommon, but you should report them to your doctor immediately)
5. **More likely to have an infection in the nasal passages**
6. **Rarely, perforation** (hole or crack) in the passageway may occur. This occurs more commonly if you do not use the proper technique of spraying away from the middle of your nose.”


**Complications of Sinusitis**

- **Orbital**
  - Diplopia, proptosis
  - Periorbital erythema, swelling

- **Bone**
  - Periosteal abscesses and arthritis

- **Brain**
  - Intracranial abscesses causing neurologic symptoms