EXCELLENCE IN EMERGENCY MEDICINE

EPPA Clinical Guidelines ISSUED: SEPTEMBER 2015 ~ REVISED 2016

MANAGEMENT OF Acute Sinusitis

This EPPA Clinical Guideline is intended to guide most, but not all, encounters involving acute sinusitis and should not replace clinical judgment; deviate from or adapt this guideline to meet the individual patient's needs.

Patient presents with Acute Sinusitis

Clinical evidence of severe disease or complication? *(a)*

Yes

No

Consider Imaging *(b)*

Differentiate Viral / Bacterial / Allergic

Viral

Bacterial

Allergic

Symptomatic Treatment *(c)*

Antibiotics *(d)* vs. Observation *(e)*

Antihistamines and Nasal Steroids

Clinical Evidence (a)

- Fever > 39°C (102.2°F) and severe headache.
- Abnormal vision.
- Periorbital edema or facial swelling.
- Altered mental status.
- Proptosis.
- Cranial nerve palsy.
- Concern for fungal sinusitis.

Viral Sinusitis

- Symptoms lasting < 10 days or symptoms progressively improving.
- If fever is present, typically resolves within 48 hours of the onset of illness.
- Purulent nasal drainage typically occurs later in illness. May start around day 5 of illness.

Bacterial Sinusitis

- Symptoms ≥ 10 days without improvement.
- Severe symptoms at onset including fever > 39°C (102.2°F), purulent nasal discharge and severe facial pain for 3-4 consecutive days at the **ONSET** of illness.
- Double sickening = worsening of symptoms after 5 days of mild URI symptoms or worsening symptoms after a period of initial improvement.

Imaging (b)

- CT imaging with IV contrast if concerned for suppurative or intracranial complication of sinusitis.
- No utility for x-ray of the sinuses.

MANAGEMENT OF
Acute Sinusitis

Key Points:

- **Definition**: Acute sinusitis is defined as acute inflammation of the nasal cavity and paranasal sinuses lasting < 4 weeks. Approximately 98% of cases of sinusitis are viral and resolve within 10-14 days. Purulent nasal drainage can be present in either bacterial or viral sinusitis.

Symptomatic Treatment (c)

- Indicated for both viral and bacterial sinusitis.
- Analgesics such as acetaminophen and NSAIDS.
- Hypertonic nasal saline wash.
  - DO NOT use tap water due to risk of amebic encephalitis.
- Consider topical and oral nasal decongestants.
  - Caution in patient with CV disease, HTN, or BPH.
- Consider nasal steroids.
- Consider mucolytics.
- Avoid antihistamines.

Option for Observation in Bacterial Sinusitis (e)

- There is moderate evidence that antibiotics provide a small benefit for clinical outcomes in immunocompetent primary care patients with uncomplicated acute sinusitis. However, about 80% of patients treated without antibiotics improve within two weeks.
- Illness must be uncomplicated, without fever and low risk for complicating illness.
- Must have follow-up.
- Initiate antibiotics in 3-10 days if symptoms persist.
- Initiate antibiotics if worsening.

Antibiotics (d)

- Goal is to shorten duration of illness, relieve symptoms and prevent complications.
- Common pathogens are S. pneumonia, H. influenza, M. catarrhalis.
- Recommendations based on the ISDA 2012 Clinical Guideline.
- **First Line Antibiotic (Adults)**
  - Amox/clav: 500mg/125mg TID **or** 875mg/125mg BID for 5-7 days.
  - *(If at risk for resistance)* Amox/clav: 2000mg BID for 10-14 days.
- **Alternative Antibiotics (PCN Allergic Patients)**
  - Doxycycline: 100mg BID for 5-7 days.
  - Levofloxacin: 500mg QD for 5-7 days.
  - Moxifloxicin: 400mg QD for 5-7 days.
  - Clindamycin + 3rd Generation Cephalosporin
- Avoid azithromycin and trimethoprim-sulfamethoxazole due to resistance.
- Azithromycin is still recommended for first line treatment in PCN allergic pregnant patients.

High Risk for Resistance

- Age < 2 years or > 65 years.
- Child that attends daycare.
- Antibiotics within the past 1 month.
- Hospitalization within past 5 days.
- Comorbidities.
- Immunocompromised.
- Prescribe longer duration of treatment 10-14 days.

Pearls for Children

- Use caution with decongestant and cold medications in children under 5 years.
- **First Line Antibiotic (Children)**
  - Amox/clav: 45 mg/kg/day ÷ BID (Max 2000mg amox) for 10-14 days.
  - *(If at risk for resistance)* Amox/clav: ES-600 90mg/kg BID for 10-14 days.
  - *(If weight > 40kg)* Use adult dosing
- **Alternative Antibiotics (PCN Allergic Patients)**
  - Clindamycin + 3rd Generation Cephalosporin (Cefixime or Cefpodoxime)
  - Respiratory fluroquinolone (if no other option)

Fungal Sinusitis

- Rapidly progressing severe infection found most commonly in immunocompromised patients and patients with poorly controlled DM.
- Exam Findings: Pale ischemic mucosa or dusky purple mucosa with crusting.
- Consideration of this diagnosis requires emergent ENT consultation.

Incidental Findings of Sinusitis on CT

- Incidental findings of sinusitis or inflammation in the frontal or maxillary sinuses do not require treatment as it is unlikely to represent an acute bacterial process.
- Only treat these findings of sinusitis on CT if patient has clinical symptoms of acute sinusitis.
- Sphenoid sinusitis represents a high risk for intracranial infection and complications and therefore should be treated with antibiotics.

- **Follow- Up:** Recommended 3-5 day follow up with primary care to assess response to therapy. Refer recurrent sinusitis (3-4 episodes of recurrent sinusitis per year) to ENT. Refer to dentistry if ondontogenic source.

Follow-Up Resources:

- **Primary Care**

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