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Sinusitis

APPROACH

- Distinct from rhinitis (inflammation of the mucous membranes of the nose), which is common with upper respiratory infections
- Presents with purulent nasal drainage accompanied by nasal obstruction, facial pain/pressure/fullness, or both
  - fever, cough, fatigue, maxillary toothache, facial swelling, ear pressure, and decreased/absent sense of smell are not consistently present
- Viral etiology is most common by far (98% of cases); but bacterial likely if any of:
  - ❑ Failure of symptoms to improve after 10 days, OR
  - ❑ Worsening of symptoms within 5-7 days after initial improvement, OR
  - ❑ In pediatric patients, high fever (>39°C) for ≥3 consecutive days and [purulent nasal discharge or facial pain]
- Examine nostrils to assess for (1) mucopurulent discharge, (2) signs of co-existent allergic sinusitis (edema, polyps), and (3) foreign bodies (esp. in children and cognitively impaired).

⚠ RED FLAGS	Possible Diagnoses*
Black necrotic tissue or black discharge	mucormycosis (fungal infection)
Altered mental status, abnormal neurological exam, meningeal signs	meningitis, intracranial abscess, cavernous sinus thrombosis
Decreased visual acuity, orbital edema/erythema	orbital cellulitis

TREATMENT of Clinically Confirmed Sinusitis

- Most resolve spontaneously and can be managed with supportive care (analgesia, antipyretics, nasal irrigation with saline solution)
  - reduce modifiable risk factors (tobacco exposure, scents/allergens)
  - maintain good hand hygiene
- Antihistamines and systemic corticosteroids not recommended; intranasal corticosteroids and brief use of decongestants may aid symptoms.
- NP cultures not recommended; imaging only for chronic sinusitis or acute complic.
- If presentation suggests persistent bacterial etiology, initiate antibx (see below)

Acute sinusitis
❑ ≤4wks, ≤3x yearly
	- Usual etiologies are *S. pneumo*, *H. influenzae*, *M. catarrhalis* (*S. aureus*, GAS, anaerobes occasionally)
	- **Adults:** Amoxicillin 0.5-1g PO TID x 5-7d
	  - **Penicillin allergy:** Doxycycline 200mg PO once, then 100mg PO BID x 5-7d
	- **Pediatric:** Amoxicillin 45mg/kg/d PO div TID or 90mg/kg/d PO div BID x 5d
	  - **Penicillin allergy:** regimens vary by severity and age
	* Alternative regimen required if immunocompromised or treatment refractory

Chronic sinusitis
❑ >12wks
	- Anaerobes more common
	- **Adults:** Amoxicillin-clavulanate 875mg PO BID x 3wks
	  - **Penicillin allergy:** Clindamycin 300mg PO QID x 3wks
	- **Pediatric:** Amoxicillin 45mg/kg/d PO div BID-TID +/- Amoxicillin-clavulanate (7:1) 45mg/kg/d PO div BID-TID x 10d
	  - **Penicillin allergy:** regimens vary by severity and age
	* Consider ENT referral to r/o allergy, structural abnormality, or immunodeficiency

Recurrent sinusitis ❑ ≥4x yearly	

Key References: 1) Rosenfeld RM, Piccirillo JF, Chandrasekhar SS, et al: Clinical practice guideline (update): adult sinusitis. Otolaryngol Head Neck Surg 2015; 152: pp. S1-S39. 2) Desrosiers M, Evans G a, Keith PK, Wright ED, Kaplan A, Bouchard J, et al. Canadian clinical practice guidelines for acute and chronic rhinosinusitis. Allergy Asthma Clin Immunol. BioMed Central Ltd; 2011;7: 2. pmid:21310056.