

Sinus Headache vs. Migraine

*John M. DelGaudio, MD, FACS
Professor and Vice Chair
Chief of Rhinology and Sinus Surgery
Department of Otolaryngology
Emory University School of Medicine*

Sinus Headache *Problems*

- A common diagnosis given to the patient with facial pressure or pain
 - Over-diagnosed and over-treated
 - Common chief complaint in Otolaryngology
 - Can lead to unnecessary surgical intervention

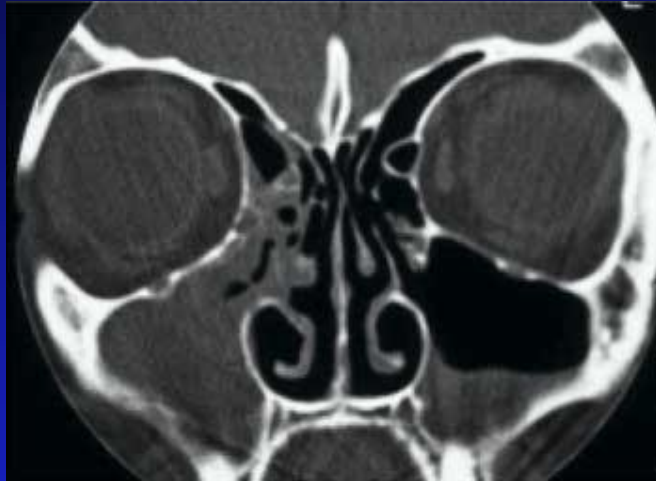


Headache Disorders

- Primary
 - Migraine
 - Tension
 - Cluster
- Secondary
 - Sinusitis
 - TMJ
 - Sleep apnea
 - Neuralgias
 - Trauma conditions
 - Intracranial processes
 - Tumor
 - Pseudotumor

Much overlap because of common mediation through Trigeminal nerves.

Rhinosinusitis Task Force: Sinusitis Defined



<http://www.powerpak.com/courses/10132/Figure3.jpg>

Major Factors

Facial Pain/Pressure- MUST be associated with ANOTHER major factor

Facial Congestion/fullness

Nasal Obstruction/blockage

Nasal Discharge/drainage

Hyposmia/anosmia

Fever (in acute)

Minor Factors

Headache

Fever

Halitosis

Fatigue

Dental pain

Cough

Ear pain/fullness/pressure

Benninger *et al* (2003); Lanza and Kennedy (1997)

Rhinogenic Headaches

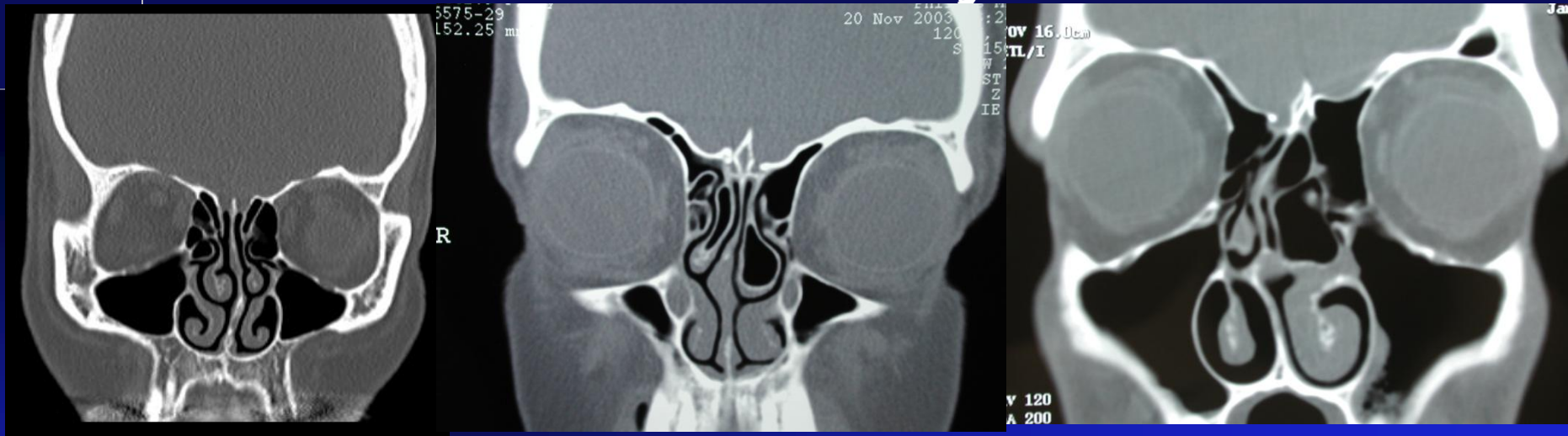
- Signs and Symptoms:
 - Nasal Stuffiness
 - Pain character – pressure
 - Pain frequency - continuous to intermittent
 - Pain location - Frontal, Periorbital, Maxillary
 - Not usually associated with Photophobia, Nausea, or Vomiting.

Rhinogenic Pain

My Rules of Thumb

- Pain attributable to sinus disease should correlate with the presence and location of the disease.
- Suspicion for other causes of facial pain should be sought if:
 - The pain is out of proportion to the degree of disease
 - The location of the pain does not correlate to the location of the disease
 - Pain is intermittent
 - Pain is brought on by weather changes, allergy, temperature changes, foods, stress
 - *The sinuses are normal on CT scan*

What about the patient with
“SINUS HEADACHE” and a
normal CT scan?
i.e. no inflammatory sinusitis



Does this represent a rhinogenic
source or migraine headache?

International Headache Society: Classic Migraine Defined

Migraine with Aura

1. At least 2 attacks fulfilling criteria (2) - (4) if aura is present
2. Headache lasts 4-72 hours
3. Headache with 2 or more of the following: unilateral, pulsating, moderate-severe intensity, aggravated by or causing avoidance of routine physical activity
4. One of the following occurs during headache: nausea, vomiting, photophobia, phonophobia
5. Headache cannot be attributed to another disorder

Headache Classification Subcommittee of the International Headache Society (2004)



IHS Migraine Classification

1. Migraine
 - 1.1 Migraine without aura
 - 1.2 Migraine with aura
 - 1.2.1 Migraine with typical aura
 - 1.2.2 Migraine with prolonged aura
 - 1.2.3 Familial hemiplegic migraine
 - 1.2.4 Basilar migraine
 - 1.2.5 Migraine aura without headache
 - 1.2.6 Migraine with acute-onset aura
 - 1.3 Ophthalmic migraine
 - 1.4 Retinal migraine
- 1.5 Childhood periodic syndromes that may be precursors to or associated with migraine
 - 1.5.1 Benign paroxysmal vertigo of childhood
 - 1.5.2 Alternating hemiplegia of childhood
- 1.6 Complications of migraine
 - 1.6.1 Status migrainosus
 - 1.6.2 Migrainous infarction
- 1.7 Migrainous disorder not fulfilling above criteria

From Headache Classification Committee of the International Headache Society. Classification and diagnostic criteria for headache disorders, cranial neuralgias and facial pain. *Cephalalgia*. 1988;8(suppl 7):1-96.

“Sinus Headache” is Usually Migraine

- 96% of patients with a diagnosis of sinus headaches met the IHS criteria for migraine HA

Cady RK, Schreiber CP. Sinus headache or migraine?
Considerations in making a differential diagnosis. *Neurology*
2002;58 (Suppl 6):S10-S14.

Sinus Headache” is Usually Migraine

- 90% of 2524 patients with diagnosis of “sinus headache” met IHS criteria for migraine HA
 - Excluded those with sinus disease and previous diagnosis of migraine HA

Schreiber CP, et al. Physician diagnosed and patient self-described “Sinus Headache” is Predominately Migraine. Arch Int Med. 2004;164:1769-1772.

Diagnostic and Therapeutic Dilemma of “Sinus Headache”

- Barbanti *et al* (2002)
 - Cranial autonomic symptoms frequently present in migraine headache
 - Nasal congestion, rhinorrhea, lacrimation, eyelid edema
 - Causes patients and physicians to attribute symptoms to sinonasal pathology
 - Trigeminal innervation

