

Approach to Chronic Daily Headache

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Objectives

- Review epidemiology
- Understand the different classifications as they may pertain to treatment
- To be cognizant of certain red flags

Chronic Daily Headache

- Primary
 - Headache duration > 4 hours
 - Chronic migraine
 - Chronic tension type headache
 - New daily persistent headache
 - Hemicrania continua

Chronic Daily Headache

- Primary
 - Headache duration < 4 hours
 - Cluster headache
 - Paroxysmal hemicranias
 - Hypnic headache
 - Idiopathic stabbing headache
 - SUNCT

Chronic Daily Headache

- Secondary
 - Medication overuse headache (MOH)
 - Posttraumatic headache
 - Cervical spine disorders
 - Associated with vascular disorders [AVM, arteritis (GCA), dissection, SDH]
 - Associated with other intracranial disorders (neoplasm, infection, intracranial hypertension)
 - Other (TMJ, sinus infection)

Epidemiology

- Prevalence 2.4 to 4.7%
- Migraine and tension type are the most common
- Represent high referral rate and prevalence in headache clinics (50-80%)
- In adolescence NDPH and CTTH are most common
- In adults CM is most common

Pathophysiology

- Abnormal excitation of peripheral nociceptive afferent fibers in the meninges
- Enhanced responsiveness of trigeminal nucleus caudalis neurons
- Decreased pain modulation from higher centers including the periaqueductal gray matter
- Spontaneous central pain generated by activation of “on cells” in the medulla
- Decreased serotonin levels
- Central sensitization

Treatment

General principles

- Identify the subtype
- Evaluate for medication overuse
- Evaluate for comorbidities (depression, anxiety)
- Establish expectations
- Non-pharmacologic therapies when appropriate (biofeedback, CBT, counseling, sleep hygiene, exercise)

Case 1

- 28 year old woman with menstrual migraines since adolescence
- Increased frequency for 1 year
- Near daily headaches which are moderate intensity with mild nausea
- 6 days with more typical migraines associated with photophobia, nausea and vomiting
- Excedrin daily, Triptan 6-8 days per month

Chronic Migraine

International Classification of headache Disorders - II

- Headache on ≥ 15 days per month for > 3 months
- Patient must have 5 prior migraines
- On ≥ 8 days for 3 months has met:
 - ≥ 2 of
 - Unilateral location
 - Pulsating quality
 - Moderate or severe pain intensity
 - Aggravated by or avoidance of physical activity
 - ≥ 1 of
 - Nausea and/or vomiting
 - Photophobia and phonophobia
- No medication overuse and no other cause

Risk factors for development of CM

- CDH may decrease slightly with age
- More common in women
- Inversely associated with education level
- Diagnosis of arthritis, diabetes, prior head trauma
- Medication overuse
- Baseline headache frequency
- *Obesity*

Treatment

- Address the modifiable risk factors
 - Attack frequency
 - Central sensitization
 - Obesity
 - Medication overuse
 - Stress
 - Snoring

Case 2

- 32 year old man with daily headaches
- Mild, dull pain, bilateral, no nausea or phonophobia
- Do not usually impair daily activities and are not worse with physical activity
- Occasionally more severe and associated with photophobia
- Headaches disappear when preoccupied
- Similar headaches were less frequent in his 20s
- OTC medication use is occasional

Chronic Tension Type Headache

- Defined by *what it is not*, i.e. migraine
- >10 episodes on ≥ 15 days/month for 3 months
 - Headache lasts hours or is continuous with 2 of
 - Pressing/tightening (nonpulsating) quality
 - Mild to moderate intensity (does not prohibit activity)
 - Not aggravated by physical activity
 - Both:
 - ≤ 1 of photophobia, phonophobia, or mild nausea
 - No severe nausea and no vomiting
 - Analgesic use on ≤ 10 days/month
 - not something else

- Lifetime prevalence of ETTH is about 80%
- CTTH more prevalent in adolescents

Case 3

- 19 year old student who started having headaches on date X
- Abrupt onset (at the time he was under a lot of stress from his examinations)
- Rare headaches prior
- Headache diary shows headaches ranging from mild to moderate and some typical of migraine

Evaluation

- Imaging
- Infectious disease
- Lumbar puncture

New Daily Persistent Headache

- Headache that within within 3 days of onset:
 - Is present daily and unremitting for 3 months
 - ≥ 2 of the following
 - Bilateral location
 - Pressing/tightening quality
 - Mild or moderate intensity
 - Not aggravated by physical activity
 - Both:
 - ≤ 1 of photophobia, phonophobia, or mild nausea
 - No severe nausea and no vomiting
 - Not something else

Case 4

- 52 year old woman with 4 year history of unilateral daily headache
- Pain is always on the right and most severe around the eye
- Most of the time headache is mild, but 1-2 times per day they are moderate and analgesics are used with minimal benefit
- Her only pain free time is sleep

Hemicrania Continua

- Headache for > 3 months with
 - All of
 - Unilateral pain without side shift
 - Daily and continuous without pain-free periods
 - Moderate intensity with severe exacerbations
 - ≥ 1 autonomic feature during exacerbation and ipsilateral to pain:
 - Conjunctival lacrimation and/or lacrimation
 - Nasal congestion and/or rhinorrhea
 - Ptosis and/or miosis
 - Complete response to therapeutic dose of indomethacin
 - Not something else

Case 5

- 31 year old woman with daily headaches unresponsive to a number of acute and preventative medications
- Bifrontal throbbing, mild photophobia, nausea
- Daily analgesics
- Triptans and preventative medications have not been helpful

Medication Overuse Headache

- *Analgesic rebound, drug induced, medication misuse*
- Biobehavioral disorder
 - Fear of headache
 - Anticaptory anxiety
 - Obsessive drug taking behavior
 - Psychologic drug dependence
- Highest risk with CM
- 1% of population, women > men
- Opioids > butalbital > aspirin/acetaminophen/
caffeine > *triptans* > NSAIDs

Medication Overuse Headache

- Headache on ≥ 15 days per month
- Regular overuse > 3 months of ≥ 1 acute treatment
 - Ergot, triptans, opioids or combination of analgesics ≥ 10 days/month over 3 months
 - Simple analgesics or any combination of Ergot, triptans, opioids on ≥ 15 days/month over 3 months
- Headache developed or markedly worsened during medication overuse

Medication Overuse Headache

- High prevalence of comorbid depression
- Depression often improves when CDH cycle is broken
- Psychiatric comorbidity is a predictor of intractability
- Withdrawing medication may improve headache frequency
- Continuing offending medication may make all other strategies fail

Case 6

- 51 year old with 1 year history of daily headaches
- At first headaches were present with sitting and standing; she often laid down with decreased intensity
- Now present all the time, bitemporal or unilateral; dull, pressure or throbbing
- Associated nausea, neck and upper back pain

Spontaneous Intracranial Hypotension

- When acute in onset may mimic SAH
- Often presents as orthostatic headache but may lose this feature over time
- CT may not diagnose condition
- LP may demonstrate low opening pressure 0-70 cm H₂O
- MRI shows
 - Diffuse pachymeningeal gadolinium enhancement
 - Cerebellar tonsillar descent
 - Crowding of posterior fossa
 - Reduced pre-pontine space
 - Descent of optic chiasm
 - Subdural hematoma
- Nuclear cisternography, CT myelography, MR myelography may determine location of leak

Case 7

- 23 year old woman with increasing headaches for the last 4 months
- Headache is associated with dizziness and blurred vision
- She has noticed some ringing in her ears
- On examination her BMI is 32 and she has papilledema

Idiopathic intracranial Hypertension

- Elevated CSF pressure without ventriculomegaly
- Headache is present 90%
- Pain may be secondary to traction on pain sensitive blood vessels, cranial nerves or dura
- Other features: transient episodes of visual loss, pulse synchronous tinnitus, diplopia due to sixth nerve paresis, papilledema

Neuroimaging in Headache

- Timing and characteristics
 - (The “first or worst” headache)
 - Subacute headaches with increasing frequency or severity
 - Progressive or new daily persistent headache
 - Chronic daily headache
 - Unilateral, same sided headaches
 - Unresponsive to treatment

Neuroimaging in Headache

- Demographics
 - New onset headaches in cancer, HIV
 - New onset headaches over age 50
 - Headaches and seizures
- Associated signs and symptoms
 - Fever, neck stiffness, nausea, vomiting
 - Focal neurologic symptoms absent from migraine with aura
 - Papilledema, cognitive impairment, personality change

Behavioral Treatment in Chronic Headache

- Rationale: It may increase the effectiveness of pharmacotherapy
- Dependence solely on medication may lead to medication overuse and risk for relapse following detoxification
- Addresses some patients' preference for non-pharmacologic treatment

Behavioral Treatment in Chronic Headache

- Evidence: Sleep disturbance and fatigue the stress have been demonstrated as more frequent triggers for headache than food, menses, weather
- Stress triggers migraine or impending migraine results in stress
- Stress may result in conversion to CM

Behavioral Treatment in Chronic Headache

- How: Ask direct questions
- Use headache diaries
- Evaluate risk factors, triggers and aggravators
- Review behaviors
- Analyze consequences
- Refer: Consider relaxation techniques, biofeedback, cognitive behavior therapy
- Set goals
- Modify behavior
- Emphasize compliance