LEGACY HEALTH PARTNERS

Chronic Headache Imaging and Treatment
Clinical Collaboration Guide

Last Reviewed: March 2024 – **FINAL**	
Steven Hill, MD	The Vancouver Clinic
Richard Rosenbaum, MD	Legacy Medical Group, Neurology
Sierra Ford, DO	Legacy Medical Group, Neurology

History and Physical Exam:

- Time of Onset
- Pattern
- Location
- Nature
- Duration
- Triggers
- Associated Sx
- Relievers
- Family Hx
- Detailed neuro exam including **fundoscopy**

Red Flags:

- Sudden onset, (worst HA ever)
- Focal neuro symptoms or findings on exam
- Immunosuppression
- Fever and meningeal signs
- Prior trauma
- Seizures
- New HA in patient with cancer history
- Positional, cough, exertion, or sexual activity induced
- Suspect complication of sinusitis/mastoiditis

Image:
See "Red Flag Recommendations" below

If headache matches one of the primary headache types below, and no red flags, no imaging required.

Migraine

- Unilateral or Bilateral
- Throbbing/Pulsing/Pounding
- Nausea/Vomiting
- Photo/Phonophobia
- Worse with activity
- 30 min- 72 hours
- Often attributed to "sinus headache" by patients

"Migraine ID" screening questions - 2/3 = 93% PPV for Migraine
1- Limit normal activity?
2- Nauseous or sick with HA?
3- Does light bother you with HA?

Tension HA

- Chronic or episodic
- Pressure/ Squeezing/ Band-like
- Mild to Moderate
- Usually Holocranial, not Unilateral

No Nausea/ Vomiting

- May have Phono/Photophobia
- Does not interfere with typical physical activity

Cluster HA

- Severe to very severe
- Unilateral eye or temple area
- 15 min — 3 hours, multiple times a day
- Assoc. with tearing, conjunctival injection, congestion, rhinorrhea, eyelid or facial swelling, sweating, Horner's syndrome (Consider trigeminal autonomic cephalgia if duration is too long or short for cluster HA)
- Restlessness/agitation

Medication Overuse HA

- Persistent, oppressive
- Often worse in AM (due to overnight medication withdrawal)
- HA present > 15 days/Month
  - 10-15 days/month of one or more med for HA symptom relief
- HA worsened during period of medication overuse
- HA resolves or reverts to previous pattern 2 months after discontinuation of overused medication
- Consider caffeine overuse as cause

Temporal Arteritis

- Consider in patients >50
- Hx of PMR, check ESR, confirm with biopsy

Medication Overuse HA treatment with Steroids

- Can be used to transition patients off of daily NSAIDS
- Evidence is limited, but can be practical to engage patients in stopping their NSAIDS.
- Medrol dosepack
- Prednisone Taper (50mg X 2 days, 40mg X 2 days...)

MIGRAINE TREATMENT PEARLS

Abortive:

- Use EARLY in the headache with highest dose tolerated.
- NSAIDS (ASA, Ibuprofen 400-800mg, Naproxyn 1500mg/day, Diclofenac 150mg/day, Acetaminophen 650-1300mg.
- Triptans: use injection or nasal spray if vomiting/nausea, contraindicated with cardiovascular or cerebrovascular disease.
- Combination of NSAID and triptan often effective.
- Ergotamines: Dihydroergotamine (DHE) 1mg X1 as IM, IV, or Nasal spray 0,5mg X 2.
- Do not use triptans and ergotamines concurrently.
- Antiemetics: can be synergistic with other abortive medications.

Caution with:

- Opioids are NOT first line treatment.
- Butalbital containing compounds (Fioricet): should NOT be used unless failed all other medications, limit to <2 days/week. High risk for rebound/overuse headaches. Patients already taking >2 days/week should be tapered, but carefully.

Prophylaxis:

- Historically underutilized and under-titrated. Titrate to max dose if tolerated.
- Set realistic expectations for effectiveness: good response is decrease in frequency and severity by about 50%
- Use for 2-3 months before determining if effective or not.
- Match medication to comorbidities.
- Patients with good control on prophylactic medications can be trialed off with gradual down-titration after 6 months if so desired.
- Botox is consideration if pt. has >15 HA/month and failed 3 prophylaxis from 3 different classes.

In order of preference (1= best evidence 2= moderate evidence 3= weak evidence)

1- **Propranolol XR:** start 60mg/day, increase every 2-4 weeks to max 240/day.
SE: hypotension, bradycardia, syncope, impotence, depression.

2- **Topiramate:** start 25mg/day, increase by 25mg every 2-4 weeks to max 200mg/day.
SE: wt. loss, paresthesia, nephrolithiasis, cognitive slowing, metabolic acidosis, hyperthermia/oligohydrosis. Can decrease efficacy of oral OCPs (dose related, mostly when >200mg/day).

2- **Amitriptyline/Nortriptyline:** start 10-25mg QHS, increase in similar increments every 2-4 weeks to max of 100mg HS.
SE: drowsiness, dry mouth, mood change, constipation, urinary retention, cardiac arrhythmias, blurred vision.

3- **Gabapentin:** Start 100mg TID, titrate up to 3600mg/day.
SE: dizziness, somnolence, ataxia, fatigue, peripheral edema.

3- **Timolol:** start 10mg/day, increase to 60mg/day div BID. Similar SE to Propranolol.

3- **Verapamil XR:** start 100mg/day, increase to max 240mg/day.
SE: hypotension, heart block, bradycardia, constipation/ileus.

3- **Valproate/Divalproex ER:** start 250mg/day, increase to 1000mg/day.
SE: mood change, wt. gain, tremor, blood dyscrasias, hepatic dysfunction. PREGNANCY CATEGORY X- AVOID IN WOMEN

Tension HA Treatment

- Use same NSAIDS as for Migraine.
- Triptans usually less helpful, but can be useful for mixed migraine/tension HA, which is not uncommon.
- Similar cautions with Opioids and Butalbital.
- Consider Physical Therapy for myofascial release or Pain Management for trigger point injections

Prophylaxis:

- Tricyclics, venlafaxine, SSRIs, Baclofen.
- Ancillary Tx: Biofeedback, relaxation techniques, massage.

Cluster HA Treatment

Abortive: Triptans (injectable Sumatriptan is first choice) or ergotamines, 02 at 6-12L/Min via non-rebreather.

Prophylaxis: 1st line is Verapamil. 2nd line Lithium, melatonin.

Referral to Neurology:

- When HA type is undetermined.
- Concern for 2ry HA or "red flags."
- HA with focal neurological symptoms other than typical visual migraine aura
- Migraine or tension HA not responsive to adequate trial of 2-3 prophylactic medications after titration to maximal dosage
- Migraine or tension HA not responsive to recommended abortive medications
- Patients in whom first line treatments are contraindicated due to comorbidities
- For overuse headaches, it is preferred if patients are weaned off offending medication for 1 month before referral, which may prevent need for referral.

Return to Primary Care:

- Once effective treatment regimen is established.
- May not be "headache free."
- Can be re-referred if de-stabilizing.

"Red Flag" Imaging recommendations:

(NB- these are first choice recommendations, alternatives may be appropriate as clinically indicated)

Sudden Onset (worst HA ever)- CT without contrast
Focal Neuro Symptoms or findings- MRI w+w/o contrast
New HA in immunosuppressed pt- MRI w+w/o contrast
Prior trauma- CT w/o contrast
Seizure with trauma- CT w/o contrast
Seizure w/o trauma- MRI w+w/o contrast
Sudden onset unilateral HA, suspect dissection or Horner's- CTA or MRA head and neck w or w/o contrast (all equal recc)
Cough, exertion, or sexual activity- MRI w+w/o contrast
Positional- MRI w+w/o contrast
Suspect mastoiditis- MRI w+w/o contrast

Scope

This guideline is for general ambulatory care and the management of common headache types.

Exclusions

Patients with structural brain disease, recent history of cancer, or traumatic brain injury.

References

Werner J. Becker, MD. Acute Migraine treatment. *Continuum* 2015:21 (4):953-972.
Richard B. Lipton, MD, FAAN. Risk Factors for and Management of Medications-Overuse Headache. *Continuum* 2015;21 (4) 1118-1131.
Stephen D Silberstein, MD, FAAN, FACP. Preventive Migraine Treatment. Continuum 2015;21 (4) 973-989.

Contact: If you have questions or comments about this guide or are interested in the development of future collaboration guides, please contact LHP medical director Albert Chaffin, M.D., at achaffin@lhs.org.

Disclaimer: No guideline can anticipate all the unique circumstances of patient care, and as such, there are times when good clinical judgement will result in, and will require deviation from this guideline. In those settings, the reason for such deviation from this guideline should be documented in the medical record.