

The Primary Care Management of Headache



Sidebar 1: General History and Physical Examination

Headache history: Frequency, character, onset, location, duration, exacerbating factors, relieving factors, prodrome/aura, associated symptoms, jaw symptoms, neck symptoms, visual deficits/changes, dizziness/imbalance, current medications, abortive dose and frequency per month, prophylactic dose, prior medication trials, hydration, meals, caffeine, sleep, exercise, nicotine/stimulant use, other comorbid conditions that may contribute to or exacerbate headaches, risk factors for MOH, history of trauma to the head and/or neck

Red flags SNOOP(4)E: Systemic symptoms, illness, or condition (e.g., fever, chills, myalgias, night sweats, weight loss or weight gain, cancer, infection, giant cell arteritis, pregnancy or postpartum, or an immunocompromised state – including HIV)

Neurologic symptoms or abnormal signs (e.g., confusion, impaired alertness or consciousness, changes in behavior or personality, diplopia, pulsatile tinnitus, focal neurologic symptoms or signs, meningismus, or seizures ptosis, proptosis, pain with eye movements)

Onset (e.g., abrupt or "thunderclap" where pain reaches maximal intensity immediately or within minutes after onset; first ever, severe, or "worst headache of life")

Older onset (age ≥50-years)

Progression or change pattern (e.g., in attack frequency, severity, or clinical features)

Precipitated by Valsalva (e.g., coughing or bearing down)

Postural aggravation

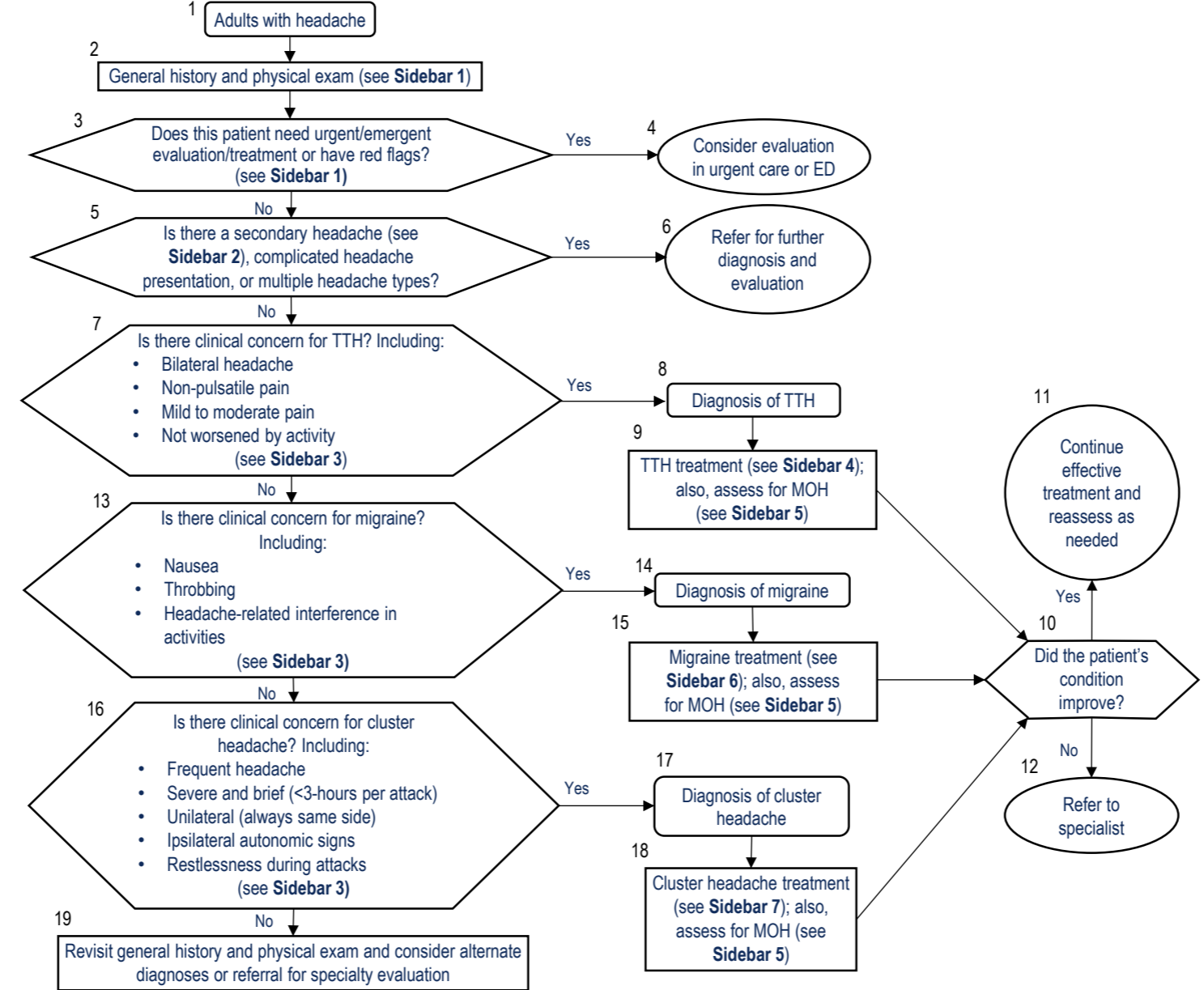
Papilledema

Exertion

Examination: Cranial nerves (including funduscopic exam), cervical spine & surrounding musculature (palpation, ROM, Spurling's), temporomandibular joint (palpation, ROM, symmetry, jaw claudication), pericranial muscle palpation, general neurologic (upper extremities reflexes, sensation, strength, UMN, pathologic reflexes), temporal artery palpation (tenderness, cord-like artery, or lack of pulse), blood pressure

Standardized headache assessments: MIDAS, HIT-6, MSQL

Module A: Evaluation and Treatment of Headache



Sidebar 2: Criteria for Determining Primary Versus Secondary Headache Disorders

Initial evaluation of headache should be targeted at determining if there is a secondary cause for the headache or if the diagnosis of a primary headache disorder is appropriate. Emergent evaluation should be considered based on red flag features. In general, a secondary headache can be diagnosed if the headache is new and occurs in close temporal relation to another disorder that is known to cause headache. It can also be diagnosed when a pre-existing headache disorder significantly worsens in close temporal relation to a causative disorder in which case both the primary and secondary headache diagnoses should be given. ICHD-3 diagnostic criteria are below.

General diagnostic criteria for secondary headaches:

- A. Any headache fulfilling C
- B. Another disorder scientifically documented to be able to cause headache has been diagnosed. Evidence of causation demonstrated by at least two of the following:
 - a. Headache has developed in temporal relation to the onset of the presumed causative disorder
 - b. Either or both of the following: headache has significantly worsened in parallel with worsening of the presumed causative disorder or headache has significantly improved in parallel with improvement of the presumed causative disorder
 - c. Headache has characteristics typical for the causative disorder
 - d. Other evidence exists of causation
- C. Not better accounted for by another ICHD-3 diagnosis

The secondary headaches include: headache attributed to: trauma or injury to the head and/or neck, cranial or cervical vascular disorder, non-vascular intracranial disorder, a substance or its withdrawal, infection, disorder of homeostasis, disorder of the cranium, neck, eyes, ears, nose, sinuses, teeth, mouth, other facial or cervical structure, or psychiatric disorder

Sidebar 3: Primary Headache Disorders Criteria				
		Tension-type headache	Migraine headache	Cluster headache
Attack duration and frequency	Duration	30-minutes – 7-days	4 – 72 hours	15 – 180 minutes
	Frequency	Variable	Variable	Once every other day to eight per day; often occurring at the same time of day
Headache characteristics	Severity	Mild to moderate	Moderate to severe	Severe or very severe
	Location	Bilateral	Unilateral	Unilateral orbital, supraorbital, and/or temporal
	Quality	Pressing or tightening, non-pulsating	Throbbing or pulsating	Stabbing, boring
	Aggravated by routine physical activity	Not aggravated by routine activity	Aggravated by routine activity	Causes a sense of agitation or restlessness; routine activity may improve symptoms
Associated features	Photophobia and phonophobia	Can have one but not both	Both	Variably present
	Nausea and/or vomiting	Neither	Either or both	May be present
Other features	Autonomic features	None	May occur, but are often subtle and not noticed by the patient	Prominent autonomic features ipsilateral to the pain (see Appendix A in the full text Headache CPG)

Sidebar 4: Treatment Options for Tension-type Headache*	
Treatment	
Amitriptyline [↑] ◆	
Botulinum toxin/neurotoxin [↓] ◆	
Ibuprofen 400 mg or acetaminophen 1,000 mg [↑] ◆◆	
Physical therapy [↑] +	

*Sidebar 8 presents additional treatment options for general headache

Sidebar 5: Common Medications and their Association with MOH	
MOH Type	Medication Overuse Frequency
Acetaminophen overuse	≥15-days/month for >3-months
NSAID overuse	
Other non-opioid analgesic overuse	
Triptan overuse	≥10-days/month for >3-months
Ergotamine overuse	
Opioid overuse	≥10-days/month for >3-months
Combination-analgesic overuse	

Abbreviations: CBT: cognitive behavioral therapy; CoQ10: coenzyme Q10; CPG: clinical practice guideline; ED: emergency department; FDA: U.S. Food and Drug Administration; GON: greater occipital nerve; HIT-6: Headache Impact Test, 6th edition; HIV: human immunodeficiency virus; IV: intravenous; mg: milligram; MIDAS: Migraine Disability Assessment Test; MOH: medication overuse headache; MSQ: Migraine-Specific Quality of Life questionnaire; N/A: not applicable; NSAID: nonsteroidal anti-inflammatory drug; ROM: range of motion; SNOOPE-4: Systemic, Neurologic, Onset sudden, Onset after 50, Pattern change, precipitated, postural, papilledema, Exertion; SPG: sphenopalatine ganglion; SQ: subcutaneous; TTH: tension-type headache; UMN: upper motor neuron

Sidebar 6: Treatment Options for Migraine Headache*	
Treatment	
AbobotulinumtoxinA and onabotulinumtoxinA [↓] ◆	
Candesartan or telmisartan [↑] ◆	
Combination pharmacotherapy [↔] ◆	
Erenumab, fremanezumab, or galcanezumab [↑] ◆	
Frovatriptan or rizatriptan [↑] ◆◆	
Gabapentin [↔] ◆	
GON block [↑] ◆◆	
Ibuprofen, naproxen, aspirin, acetaminophen [↑] ◆◆	
IV magnesium [↑] ◆◆	
Lisinopril [↑] ◆	
Magnesium, oral [↑] ◆	
Nimodipine or nifedipine [↔] ◆	
Nutraceuticals: CoQ10, feverfew, melatonin, omega-3, vitamin B2, and vitamin B6 [↔] ◆	
OnabotulinumtoxinA [↑] ◆	
Propranolol [↑] ◆	
Sumatriptan, sumatriptan/naproxen, or zolmitriptan [↑] ◆◆	
Topiramate [↑] ◆	
Triptans [↑] ◆◆	
Valproate [↔] ◆	

*Sidebar 8 presents additional treatment options for general headache

↑↑ Indicates a “Strong for” recommendation strength
 ↑ Indicates a “Weak for” recommendation strength
 ↓ Indicates a “Weak against” recommendation strength
 ↔ Indicates a “Neither for nor against” recommendation strength
 # Indicates the treatment was not included in the CPG’s evidence review

Sidebar 7: Treatment Options for Cluster Headache*	
Treatment	
Galcanezumab [↑] ◆	
Lovastatin [#] ◆	
Non-invasive vagus nerve stimulation [↑] ++	
Oxygen therapy [↔] ◆◆	
Pharmacotherapy for acute treatment [↔] ◆◆	
Pravastatin [#] ◆	
Sumatriptan SQ (not oral) [#] ◆◆	
Zolmitriptan nasal spray [#] ◆◆	

*Sidebar 8 presents additional treatment options for general headache

Sidebar 8: Treatment Options for Headache in General	
Treatment	
Acupuncture [↔] +	
Aerobic exercise/progressive strength training [↑] +	
CBT or biofeedback [↔] +	
Dietary trigger education [↑] +	
Dry needling [↔] +	
Elimination-based diet testing [↔] +	
Fluoxetine or venlafaxine [↔] ◆	
IV ketamine [↓] ◆◆	
IV metoclopramide, IV prochlorperazine, or intranasal lidocaine [↔] ◆◆	
Mindfulness-based therapy [↑] +	
Neuromodulation [↔] +	
Pulsed radiofrequency or SPG [↔] +	

+ indicates non-pharmacologic therapy – preventive; ++ indicates non-pharmacologic therapy – abortive; ◆ indicates pharmacotherapy – preventive; ◆◆ indicates pharmacotherapy – abortive