Best Practice Guidance for Outpatient Treatment of Migraine

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Objectives

1. Improve recognition of migraine
2. Recognize and address medication overuse headache
3. Optimize lifestyle interventions
4. Guide for migraine acute therapy: When and what
5. Guide for migraine prevention: When and what
6. Review principles of pediatric migraine management
7. Outline criteria for neurology referral

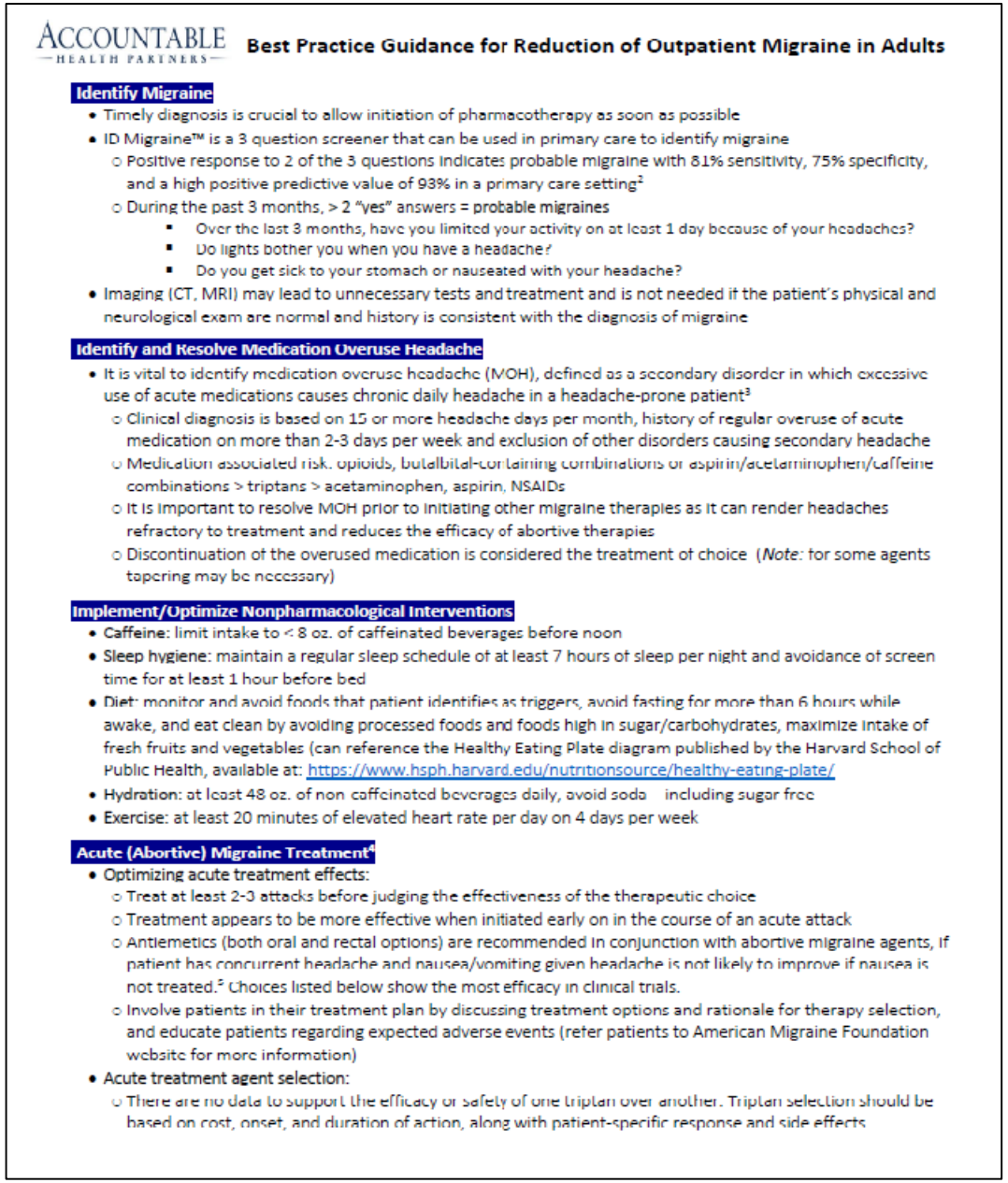
Background

- **Migraine is common in the general population**
  - 17% of women and 9% of men have migraine in US
  - Migraine is the 3rd leading cause of disability from 15-49
- **Migraine is associated with a substantial economic burden in the US**
  - Direct costs are ~$6,575 and indirect costs are ~$2,350 higher compared to those without migraine
- **Majority of migraine management is done by PCPs**

AHP Best Practice Guidance Documents

Found on AHP Network Website

https://ahpnetwork.com/clinical-resources/clinical-guidelines/



ACCOUNTABLE HEALTH PARTNERS

Best Practice Guidance for Reduction of Outpatient Migraine in Adults

Identify Migraine

- Timely diagnosis is crucial to allow initiation of pharmacotherapy as soon as possible
- ID Migraine™ is a 3 question screener that can be used in primary care to identify migraine
  - Positive response to 2 of the 3 questions indicates probable migraine with 81% sensitivity, 75% specificity, and a high positive predictive value of 93% in a primary care setting[2]
  - During the past 3 months, > 2 "yes" answers = probable migraines
    - Over the last 3 months, have you limited your activity on at least 1 day because of your headaches?
    - Do lights bother you when you have a headache?
    - Do you get sick to your stomach or nauseated with your headache?
- Imaging (CT, MRI) may lead to unnecessary tests and treatment and is not needed if the patient's physical and neurological exam are normal and history is consistent with the diagnosis of migraine

Identify and Resolve Medication Overuse Headache

- It is vital to identify medication overuse headache (MOH), defined as a secondary disorder in which excessive use of acute medications causes chronic daily headache in a headache-prone patient[3]
  - Clinical diagnosis is based on 15 or more headache days per month, history of regular overuse of acute medication on more than 2-3 days per week and exclusion of other disorders causing secondary headache
  - Medication associated risk: opioids, butalbital-containing combinations of aspirin/acetaminophen/caffeine combinations > triptans > acetaminophen, aspirin, NSAIDs
  - It is important to resolve MOH prior to initiating other migraine therapies as it can render headaches refractory to treatment and reduces the efficacy of abortive therapies
  - Discontinuation of the overused medication is considered the treatment of choice (*Note:* for some agents tapering may be necessary)

Implement/Optimize Nonpharmacological Interventions

- **Caffeine:** limit intake to < 8 oz. of caffeinated beverages before noon
- **Sleep hygiene:** maintain a regular sleep schedule of at least 7 hours of sleep per night and avoidance of screen time for at least 1 hour before bed
- **Diet:** monitor and avoid foods that patient identifies as triggers, avoid fasting for more than 6 hours while awake, and eat clean by avoiding processed foods and foods high in sugar/carbohydrates, maximize intake of fresh fruits and vegetables (can reference the Healthy Eating Plate diagram published by the Harvard School of Public Health, available at: https://www.hsph.harvard.edu/nutritionsource/healthy-eating-plate/
- **Hydration:** at least 48 oz. of non caffeinated beverages daily, avoid soda including sugar free
- **Exercise:** at least 20 minutes of elevated heart rate per day on 4 days per week

Acute (Abortive) Migraine Treatment[4]

- Optimizing acute treatment effects:
  - Treat at least 2-3 attacks before judging the effectiveness of the therapeutic choice
  - Treatment appears to be more effective when initiated early on in the course of an acute attack
  - Antiemetics (both oral and rectal options) are recommended in conjunction with abortive migraine agents, if patient has concurrent headache and nausea/vomiting given headache is not likely to improve if nausea is not treated.[5] Choices listed below show the most efficacy in clinical trials.
  - Involve patients in their treatment plan by discussing treatment options and rationale for therapy selection, and educate patients regarding expected adverse events (refer patients to American Migraine Foundation website for more information)
- Acute treatment agent selection:
  - There are no data to support the efficacy or safety of one triptan over another. Triptan selection should be based on cost, onset, and duration of action, along with patient-specific response and side effects

Migraine Diagnosis

ID Migraine™ - 3 question tool

During the last 3 months, did you have the following with your headaches:

1. Are you nauseated or sick to your stomach?
2. Does light bother you?
3. Has a headaches limited your ability to work, study or do what you needed to do for at least 1 day?

"Yes" to at least 2 of the above questions **indicates probable migraines** with 81% sensitivity, 75% specificity and a high positive predictive value of 93% in a primary care setting.

Lipton et al. Neurology 2003.

Medication Overuse

Diagnosis

- >15 headache days/month and history of acute medication use on more than 2 to 3 days/week

Importance (*identify early!*)

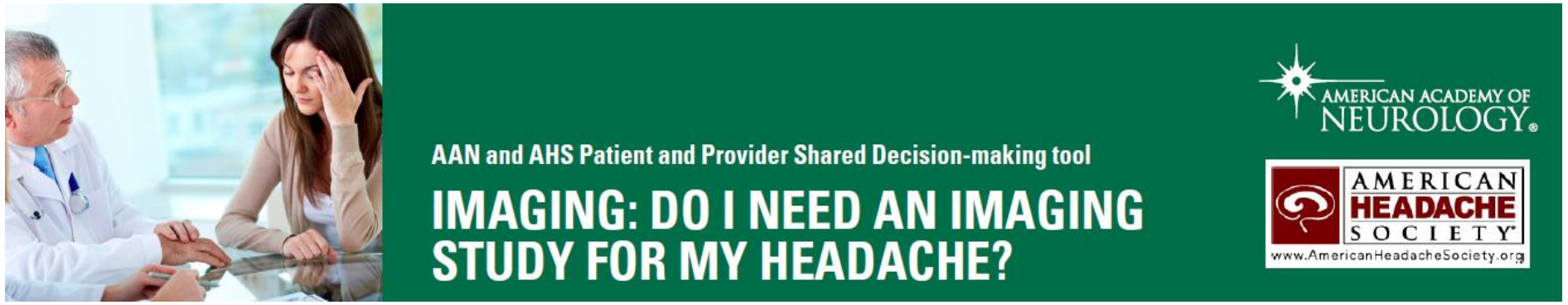
- MOH can render headaches refractory to other treatments

Risks

- Worst offenders: Opioids, Butalbital or ASA/APAP/Caffeine combinations>Triptans>APAP, ASA, NSAIDs
- Use of abortive agents on more than 2-3 days/week

Imaging for Migraine

- **American Academy of Neurology Guidelines and Quality measures advise:**
- Do not image if patient presents with a headache consistent with a primary headache disorder and a normal neurologic exam



Lifestyle Modifications

Strategies	Goal(s)
Reduce caffeine	<8 oz. of caffeinated beverages before noon
Maintain regular sleep	At least 7hrs of sleep per night Avoid screen time for ≥1 hour before bed
Improve diet and avoid triggers	Monitor and avoid trigger foods Avoid fasting more than 4-6 (awake) hrs. Eat a well-balanced, healthy, diet
Improve hydration	48 oz. of non-caffeinated, non-carbonated drinks/day
Regular exercise	At least 20 min. per day x 4 days per week

Acute Treatment (*Abortive*)

First-Line Options

- Sumatriptan 100 mg (tablets only)*
- Zolmitriptan 5 mg (tablets only)*
- Ibuprofen 600 - 800 mg

*There are no data to support the efficacy or safety of one triptan over another. Selection should be based on onset, duration of action, and cost, along with patient-specific response and side effects.

Choosing Wisely®

An initiative of the ABIM Foundation

Agents to AVOID

AVOID

- **Caffeine-containing medications: Limit use.**
  Use >2 days/week greatly increases the risk of MOH
- **Opioids: Avoid**
  Contribute to MOH, tolerance/dependency, and decrease responsiveness to other agents
- **Butalbital: Avoid**
  Contribute to MOH, tolerance/dependency, and decrease responsiveness to other agents

Optimal Use of Abortive Agents

1. Initiate abortive agent as early as possible

2. Restrict use of abortive medications to 2-3 days/week

3. **Co-prescribe antiemetics *if concurrent nausea or vomiting***

4. Set patient-centered expectations and monitor ability to resume daily activities

5. Treat 2-3 attacks before judging agent effectiveness

Preventative Therapy

When to Start (*Episodic Migraine*)

- ≥4 migraines per month and/or ≥6 headache days per month (and <15 days per month)

Why to Start

- Episodic migraine progresses to chronic migraine at the rate of 2.5% per year

Goals of Therapy

- 50% reduction in attack frequency or headache days, improved response to acute medication

Preventative Agents

Guideline Recommended Options

- Antihypertensives
- Antiepileptics
- Antidepressants

- Choice of preventive therapy should be based on comorbidities, side effect profile, and cost.
- **Important to allow at least 3 months to assess response to preventative agent**

Preventative Therapy

When to Start (*Chronic Migraine*)

- Headache burden of **>15 days/month** (≥8 being migraine-like or responding to migraine medication)

Medications with Efficacy

- Botox, topiramate, CGRP monoclonal antibodies

How to Address

- Optimize lifestyle, address MOH, refer to Neurology

Pediatric Migraine Pearls

10% of female and 6% of male children have migraines

Acute treatment: Ibuprofen (10 mg/kg) for all ages; sumatriptan 20 mg nasal spray, sumatriptan/naproxen, zolmitriptan 5mg NS, rizatriptan 10 mg, almotriptan 12.5 mg are recommended in ages 12-17.

Preventative treatment: Most RCT of preventative medications have not shown superiority over placebo (including topiramate, amitriptyline, propranolol, valproic acid, Botox)

Recommendations:

- Counseling on lifestyle and behavioral factors
- Assess and manage comorbidities
- Discuss options and limited evidence to support medications

When to consider referral to neurology

1. **Red Flag** headache presentation
2. Chronic migraine (15 or more headache days per month, 8 of which have migraine features)
3. High frequency episodic migraine with adequate trial and failure of at least 2 abortives and 2 preventative agent
4. MOH unresponsive to efforts to taper

The PCP's Experience

i.e. what I learned working with the team on these guidelines

- **Start with the 100mg sumatriptan dose!**
- **Treat nausea aggressively**
- **Consider migraine early in your ddx**
- **Treating medication overuse is necessary but often not sufficient**
- **Patience, lifestyle counseling, and adequate medication trials are key**