PEDIATRIC MIGRAINE

PEDIATRIC MIGRAINE CRITERIA (International Classification of Headache Disorders, 3rd Edition)

MIGRAINE WITHOUT AURA

60-80% of childhood migraines

A. At least **5 distinct attacks** meeting the following criteria
B. Attacks lasting **1*-72 hours**
C. At least 2 of the following:
   - **Bilateral*** or **unilateral**
   - **Pulsing** or **throbbing** quality
   - **Moderate** or **severe pain** intensity
   - Aggravated by or causing avoidance of **physical activity**
D. At least one of the following during the headache:
   - **Nausea** and/or **vomiting**
   - **Photophobia** and **phonophobia**
E. Not attributed to another diagnosis

** Different from adult migraine*

MIGRAINE WITH AURA

15-30% of childhood migraines

A. At least **2 distinct attacks** meeting the following criteria
B. Aura consisting of at least one of the following reversible symptoms:
   - **Visual** *(most common)*, **sensory, dysphasic speech disturbance, motor, brainstem,** and/or **retinal symptoms**
C. At least 3 of the following:
   - At least 1 aura symptom **develops gradually over ≥ 5 minutes**
   - 2 or more aura symptoms occur in **succession**
   - Each aura symptom lasts **≥ 5** and **≤ 60 minutes**
   - At least 1 aura symptom is **unilateral**
   - At least 1 aura symptom is **positive** (scintillations, pins & needles, etc)
   - Headache begins **during aura** or **follows the aura within 60 minutes**
D. Not attributed to another diagnosis

ASSOCIATED CONDITIONS

Episodic syndromes:
- Cyclic vomiting syndrome
- Abdominal migraine
- Benign paroxysmal vertigo
- Benign paroxysmal torticollis

CHRONIC MIGRAINE

- Headache occurring on **≥ 15 days/month** for **≥ 3 months**.
- Patient has features of **migraine headache** on at least **8 days/month**.

MEDICATION OVERUSE HEADACHE (MOH)

- Worsening headache that develops in a patient with **pre-existing primary headache**, who uses **acute headache medication ≥ 15 days/month** for **3 months**.
- 50% of patients diagnosed with chronic migraine have MOH, which returns to an episodic migraine once the offending medication is discontinued.

STATUS MIGRAINOSUS

- A migraine that is **unremitting for ≥ 72 hours** with **debilitating pain** and/or associated symptoms.
- Often associated with medication overuse.

EVALUATION:

Comprehensive **medical history**. Thorough **neurologic examination**.

Red flags?

Possible **secondary headache**, consider **neuroimaging**, and/or **neurology referral**.

No red flags
Normal neurological exam

DIAGNOSIS OF MIGRAINE

RED FLAGS FOR 2º HEADACHE

- **Systemic symptoms**: fever, chills, weight loss, rash, and joint pain
- **New** or **different headache**: change in frequency, severity, or clinical presentation
- **Onset**: explosive or sudden severe headache
- Headache **precipitated by Valsalva**: straining, coughing, or sneezing
- Headache with **positional changes**
- **Neurologic signs** or **symptoms**
- **Sleep-related headache**: waking patient from sleep or always present in the morning
- **Secondary risk factors**: hypercoagulability, neurocutaneous disorder, cancer, rheumatologic disorder

"SMART" LIFESTYLE

SLEEP – regular and adequate sleep; ↓ blue-light exposure from electronics
MEALS – regular and frequent meals, including breakfast and good hydration
ACTIVITY – regular, but not excessive, aerobic exercise
RELAXATION – relaxation techniques, stress management
TRIGGER AVOIDANCE – avoid stress, sleep deprivation, and other triggers

+

ACUTE MIGRAINE MANAGEMENT

Rest in a dark and quiet location. Encourage **sleep**. Optimize **hydration**. Give meds *as soon as possible* after headache onset.

↓

1st line: **NSAIDs** (ibuprofen or naproxen) or **acetaminophen**.

↓

If the response is inadequate, consider a **triptan** (2nd line).

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FDA approved triptans: **6+ years old**: rizatriptan oral melts.
12-17 years old: almotriptan oral tablets, zolmitriptan nasal spray, and sumatriptan/naproxen oral tablets.

≥ 4 headache days per month

PROPHYLACTIC MIGRAINE MANAGEMENT

Consider a 2-3 month trial.

Supplements: vitamin B_2, magnesium, melatonin, or coenzyme Q10
+
Medications: topiramate, propranolol, or amitriptyline
+/-
Cognitive behavioral therapy
+
Counsel about the **risk of medication overuse headache**

MIGRAINE MANAGEMENT IN THE EMERGENCY DEPARTMENT:
IV fluids, IV ketorolac, IV metoclopramide or prochlorperazine, place the child in a quiet, dark room and encourage sleep

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