

Inclusion Criteria: Patients age ≥6 years presenting with headache (HA) lasting 2-72 hours with *at least one* of the following characteristics: (1) non-occipital location; (2) pulsating quality; or (3) aggravated by or causing avoidance of routine physical activity
AND *at least one* of the following: nausea, vomiting, photophobia, phonophobia.
 Patients must have a previous similarly described headache with relief from comparable medications [normal saline bolus, non-steroidal anti-inflammatory drug (NSAID), and/or anti-dopaminergic agent]

Exclusion Criteria: Age <6 years, abnormal neurologic exam, pregnancy, cardiovascular disease, uncontrolled hypertension, intracranial shunt, fever, malignancy, closed head injury/trauma within 24 hours, concussion within 2 months, seizure, concern for increased intracranial pressure/Cushing Triad, sudden-onset headache reaching maximum intensity within 5 minutes.

Initial Evaluation

Nursing Interventions to occur immediately upon rooming patient:

- Determine headache (HA) pain score using Wong-Baker FACES Pain Rating Scale or Numeric Pain Rating Scale¹
- Lights and TV off; encourage not using electronic devices
- Determine and document last dose of NSAID and acetaminophen
- Determine and document last dose of any other medications given to abort headache
- Obtain POCT urine b-HCG for all females age 11 or greater

¹ Headache Pain Score

- Use Wong-Baker FACES Pain Rating Scale or Numeric Pain Rating Scale
- Evaluate HA pain score 45 mins after completion of each intervention
- Discharge goal: repeat HA pain score is ≤50% of the *initial* pain score

Initial Management

Medications:

- **Sumatriptan IN** - if not administered in past 2 hours AND no contraindications (**Appendix A**)
 - < 30 kg: 5 mg (max 10 mg/day)
 - 30-39.9 kg: 10 mg (max 20 mg/day)
 - ≥ 40 kg: 20 mg (max 30 mg/day)
- If dose appropriate NSAID has not been given with the last 6 hours:
 - Add **Ibuprofen PO** 10 mg/kg, max 600 mg, if able to tolerate PO

Other Considerations:

- Oral rehydration

Assessment:

- **Reassess headache score¹** 45 minutes after completion of above interventions

Is this reassessment HA score <50% of the *initial* headache score?

Access:

- Place PIV

Medications/Hydration:

- **NS bolus IV** 20 mL/kg (max 1 L) x 1
- **Prochlorperazine IV** 0.15 mg/kg (max 10 mg) x1
- 6 hours after last NSAID:
 - **Ketorolac IV** 0.5 mg/kg (max 15 mg) x1
- If patient has extrapyramidal symptoms (*dystonia, akathisia, tardive dyskinesia, slurred speech*):
 - Consider **diphenhydramine PO** 1 mg/kg (max 50 mg) x1

Assessment:

- **Reassess headache score¹** 45 minutes after completion of above interventions

Is this reassessment HA score <50% of the *initial* headache score?

Proceed to discharge²

Medication/Hydration:

- Repeat NS bolus 20 mL/kg IV x 1 (max 1L)
- **Magnesium sulfate IV** 30 mg/kg (max 2g)

Assessment:

- **Reassess headache score¹** 45 minutes after completion of above interventions

Is this reassessment HA score <50% of the *initial* headache score?

Proceed to discharge²

Admit to Inpatient units.
 Consult Neurology to determine to which service patient should be admitted

²DISCHARGE:

Discharge Criteria:

- Pain from headache is ≤50% of the *initial* HA pain score
- Tolerating PO

Discharge Instructions:

- Establish plan for patient to follow-up with PCP within 48 hours
- Encourage PCP referral to Neurology if:
 - Patient has failed a daily preventative medication for at least 12 weeks
 - Write: "Per Connecticut Children's Headache Pathway, please strongly consider referral to Pediatric Neurology"
- Encourage PCP referral to Pain Team Headache Clinic if:
 - If patient has failed two daily preventative medications for at least 12 weeks each **OR** patient has been previously evaluated by the pain team for any purpose
 - Write: "Per Connecticut Children's Headache Pathway, please strongly consider referral to Pain Team's Headache Clinic"

CLINICAL PATHWAY:

**Acute Management of Migraine and Migraine-Like Headache
Appendix A: Contraindications to Sumatriptan**

THIS PATHWAY
SERVES AS A GUIDE
AND DOES NOT
REPLACE CLINICAL
JUDGMENT.

- Sumatriptan administered < 2 hours prior
- Already received max daily dose of sumatriptan

Weight (kg)	Max Dose of IN Sumatriptan per 24 hours (mg)
<Less than 30 kg	10 mg
30-39.9 kg	20 mg
40 kg and above	40 mg

- Ischemic heart disease
- Prinzmetal's angina
- Peripheral vascular disease
- Uncontrolled HTN
- Stroke
- Severe hepatic impairment
- Pregnancy
- History of organ transplant
- Use of another 5HT1 agonist (other than sumatriptan) or ergotamine derivatives within the last 24 hours
- Use of MOA-I in past 2 weeks