

Pediatric Migraine Management



STEVEN M. WOLF, MD

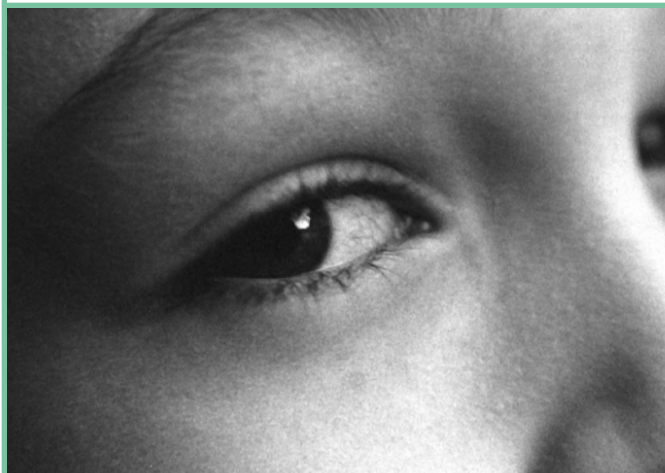
Director of Pediatric Epilepsy
Beth Israel Medical Center
New York, N.Y.

PATTY MCGOLDRICK, CPNP

Pediatric Neurology
Beth Israel Medical Center
New York, N.Y.

MAUREEN SULLIVAN RPH

Clinical Pharmacy Manager
Beth Israel Medical Center
New York, N.Y.



Half of all migraine patients experience migraines before age 15, with some occurring as early as 2 to 3 years of age. Migraines can be benign, recurrent, throbbing, or pulsating. They are usually classified as migraine with aura, migraine without aura, cluster headache or tension-type headache. Nausea, vomiting, photophobia, and phonophobia are associated symptoms (Table 1). Studies indicate that approximately 5% to 8% of children suffer from migraines. By age 7, migraines occur in 1.2% to 3.2% of children. In ages 7 to 15 years, the prevalence ranges from 4% to 11%. The peak age at onset for migraine with aura (temporary visual disturbances, such as flashes of light) is 5 to 10 for males and 12 to 13 for females. For migraine without aura, the peak age at onset is 10 to 11 for boys and 14 to 17 for girls (Table 2).

Prior to puberty, the prevalence of migraines appears to be equal, or slightly higher, in boys than in girls. After puberty, however, there is a female preponderance, with nearly 3 times as many females as males suffering from migraines. Studies suggest that migraine is a condition of long duration.

Children with migraines have a 50% to 75% risk of experiencing migraines as adults.

Since migraines are inherited in 80% of pediatric patients, a positive family history of migraine or headache is one of the most important clues in diagnosing chronic head pain. Yet, even when a parent is a known migraineur, a child's migraine may remain undiagnosed for some time.

Migraines severe enough to impair functioning affect approximately 1 out of 10 children between the ages of 9 and 18. In a national survey conducted by the American Academy of Family Physicians (*Am Fam Physician* 2002;65:625-632, 635-636), researchers found that among school-age children, frequent or severe headache ranked fifth in prevalence among 17 chronic conditions, and was the third leading cause of school absence. Approximately 10% of young people with migraine miss more than 2 school days per month, and roughly 1% miss 2 days per week. Children and adolescents tend to have migraines of shorter duration. Other migraine characteristics, such as quality of pain, are difficult to diagnose in pediatric patients. Prevalence of migraines in the pediatric population appears to be increasing.

Table 1. Pediatric Migraine Types and Associated Symptoms

Symptoms (Sx)	Migraine With Aura	Migraine Without Aura	Cluster Headache	Tension-Type Headache
Photophobia	+	+	–	–
Phonophobia	+	+	–	–
Quality	Pulsatile	Pulsatile	Intense, nonthrobbing, periorbital pain that may generalize to the entire hemi-cranium	Tightness or pressure in band-like distribution, either tenderness or tightness of muscles in occiput or posterior cervical region
Interferes With Functioning	+	+	+	–
Duration	30 min–48 h (shorter than in adults)	30 min–48 h	15-180 min occurring qod up to 8 times/d	Can last all day
Location	Bilateral or unilateral	Bilateral or unilateral	Periorbital	Varies
Intensity	Moderate to severe	Moderate to severe	Severe	Varies
Aggravated by Activity	+	+	–	–
Nausea/Vomiting	+	+	–	–
Frequency			qod to 8 times/d	>15 times/mo
Aura	–	+ Often visual—scotoma, blurred vision, flashing light, hemianopsias, or other—paresthesias, hemiparesis, vertigo, aphasia, visual hallucinations	–	–
Neurological Sx/Other Sx	–	+ Transient neurologic deficits or alteration in level of consciousness (seen with basilar or complicated migraines)	Conjunctival injection/ptosis crimination/rhinorrhea ipsilateral to pain	–

Table 2. Risk Factors for Pediatric Migraines

Sex	Slight female preponderance after puberty; equal distribution, before puberty
Age	3-6-year-olds: 3% headache incidence 7-15-year-olds: 4%-11% headache incidence
Family History	History of migraines
Other Illnesses	Motion sickness, depression
Social Factors	School difficulties, social problems, family stresses

Table 3. Pediatric Migraine Patient Discharge Instructions

Age Group	Instructions
Children/Adolescents	Adequate sleep: 9-10 hs uninterrupted per night
Children/Adolescents	No caffeine, including soda, coffee, tea, iced tea
Adolescents (Occasionally an Issue in Children)	No skipping meals
Adolescents (Occasionally an Issue in Children)	Avoid food triggers
Children/Adolescents	Use of medication for acute migraines (see Table 8)
Children/Adolescents	Parent should call physician for results of testing, next appointment, if headaches worsen or become more frequent or symptoms change

Diagnosis

The International Headache Society (IHS) classification is continually being modified—particularly in the pediatric age group, where certain migraine types may manifest differently from adults. The proposed IHS classification for migraine without aura includes the following diagnostic criteria:

1. At least 5 attacks
2. Headache attack lasting 30 minutes to 48 hours
3. Headache with at least 2 of the following characteristics:

- Bilateral (frontal/temporal) or unilateral location
 - Pulsating quality
 - Moderate to severe intensity
 - Aggravation by routine physical activity
4. During headache, at least 1 of the following:
- Nausea or vomiting
 - Photophobia or phonophobia

The recommended evaluation for children presenting with headache or migraine remains a thorough history, a general examination, and a neurologic examination. Neuro-imaging is indicated when there are neurologic symptoms, symptoms

of increased intracranial pressure, or symptoms of progressive neurologic disease. Laboratory testing (eg, complete blood count, thyroid, Lyme titers) is indicated for headaches occurring more than 4 times per week.

Treatment

Treatment of migraine begins with lifestyle modifications including adequate sleep (9-10 hours per night), no skipping of meals, and no caffeine intake. Avoidance of any identified triggers should also be stressed (Table 3).

Table 4. Preventive Medications for Pediatric Migraines

	Medication	Dose	Available Dosage Forms	What to Expect	Comments
Antidepressants	Amitriptyline	Initial dose: 10 mg/d*. Titrated up to 25 mg if necessary.	Injection and tablets	Should see improvement in 1-3 wk. May administer with food to decrease stomach upset.	May cause dry mouth, sedation, urinary retention, and weight gain. May discolor urine to a blue-green color. May increase sensitivity to the sun. Avoid use with other antidepressants, ergot derivatives, triptans, and any medication that may slow actions.
	Nortriptyline	Initial dose: 10 mg/d*	Capsules and oral solution. Should see results in 1-3 wk. May administer with food to decrease stomach upset.	May cause dry mouth, sedation, urinary retention, and weight gain. May increase sensitivity to the sun.	Avoid use with other antidepressants, ergot derivatives, triptans, and any medication that may slow actions.
	Fluoxetine	Initial dose: 5-10 mg/d*	Capsule and oral solution	Maximum effects seen after 4 wk	May cause drowsiness, nausea, and nervousness. Avoid use with other antidepressants, ergot derivatives, triptans, and any medication that may slow actions.
	Paroxetine (Paxil, GlaxoSmithKline)	Initial dose: 5-10 mg/d*	Tablets and oral suspension (orange flavor)	Effects seen in 1-4 wk	May cause dizziness, dry mouth, tiredness, stomach upset, nausea, and inability to sleep. Avoid use with other antidepressants, ergot derivatives, triptans, and any medication that may slow actions.
	Sertraline (Zoloft, Pfizer)	Initial dose: 25 mg/d*	Oral solution and tablets	Maximum effect may take several weeks	May cause agitation, dizziness, nervousness, sleep disturbances, and upset stomach. Do not take with grapefruit juice. Avoid use with other antidepressants, ergot derivatives, triptans, and any medication that may slow actions.
Anticonvulsants	Divalproex (Depakote, Abbott) and Divalproex extended release (Depakote ER, Abbott)	Initial dose: 125 mg/d* ER 250-500 mg/d*	Capsule, tablet, and solution ER tablets	Should see improvement in about 1 wk. May give with food to decrease stomach upset. Do not give with milk or carbonated drinks.	May cause drowsiness, hair loss, nausea, tremor, and weight gain. Certain antibiotics may decrease effectiveness of this medication. In addition, divalproex may increase concentration of some antidepressants.
	Gabapentin (Neurontin, Pfizer)	Initial dose: 5 mg/kg/dose at bedtime	Capsules and solution (strawberry anise flavor)	Should see improvement in 1 wk	May cause dizziness, sleepiness, and unsteadiness. Avoid products that may slow actions and reactions. These include sedatives, mood stabilizers, antihistamines, and other pain medications.
	Topiramate (Topamax, Ortho-McNeil)	Initial dose: 1-3 mg/kg/d* for a maximum of 25 mg given nightly	Tablets 25 mg, 100 mg, and 200 mg. Capsule and sprinkle 15 mg and 25 mg	Should see improvement in approximately 1 wk. May take with or without food.	Drowsiness and sleepiness are the most common side effects.
Antihistamine	Cyproheptadine	Initial dose: 4 mg 2-3 times/d*	4 mg tablet; syrup 2 mg/5mL (mint flavor)	Should see improvement in a few days. May administer with food or milk.	Can cause drowsiness. May increase sensitivity of skin to sunlight causing sunburn. Avoid using in combination with antidepressants.
β-Blockers	Nadolol	Initial dose: 10 mg/kg/d* up to 40 mg. May titrate 2.5 mg/kg/d* up to 320 mg.	Tablets: 20, 40, 80 mg	Should see improvement in a few days.	May cause bradycardia, depression, dreams, fatigue, memory impairment, and sleep disturbances. If you are diabetic these medications may mask the signs of hypoglycemia. They may also blunt the effects of the asthma medication albuterol.
	Propranolol	0.6-1.5 mg/kg/d* divided q8h to a maximum of 4 mg/kg/d* OR ≥35 kg 10-20 mg tid. ≥35 kg: 20-40 mg tid	Tablets and oral solution (strawberry-mint flavor)	Should see effects in a few days. May administer with food.	
Calcium Channel Blockers	Verapamil	Initial dose: 40 mg q8h.	Tablets	Should see effects in a few days. May administer with or without food. Do not take with grapefruit juice	May cause constipation, swelling of extremities and lightheadedness. May increase levels of medications carbamazepine and digoxin; avoid combination.
	Diltiazem	Initial dose: 1.5-2 mg/kg/d* in 3-4 divided doses	Tablets	Should see effects in about 1 wk. May administer with or without food.	May cause bradycardia and swelling of extremities.

* /d=per day

Prevention

For the prevention of migraines (occurring more than 3 to 4 times per week) children can be treated with antidepressants, anticonvulsants, β-blockers or calcium channel blockers (Table 4).

Pharmacologic Treatment

Pharmaceutical treatment begins with nonsteroidal anti-inflammatory drugs (NSAIDs) prn. Ibuprofen should be given in adequate doses for the child's weight. Parents may be underdosing. If this is ineffective, naproxen should be tried (Table 5).

If these treatments are ineffective for headaches with migraine symptoms (eg, phonophobia or photophobia, nausea or vomiting), children should be instructed in the use of a triptan. For example, sumatriptan (Imitrex, GlaxoSmithKline) has been found to be effective, especially in the nasal spray formulation. (Table 6). For acute treatment of status migrainous (headache fitting IHS proposed criteria and lasting >72 hours) various treatment options can be instituted (Table 7).

There are a number of drug interactions that physicians treating pediatric migraines should be

aware of; namely, β-blockers should not be used in combination with calcium channel blockers (Table 8).

Alternative medications for pediatric migraines include ginger, alerian, feverfew, magnesium and riboflavin. There is no definite data indicating that these herbal, mineral and vitamin remedies are effective, but they offer an alternative to Western medicine. Physicians should keep in mind that alternative medications may have side effects and interactions with conventional therapies (Table 9).

Table 5. Pharmacologic Treatment of Acute Pediatric Migraines

Drug	Dose
Acetaminophen	15 mg/kg PO
Ibuprofen	5-10 mg/kg
Naproxen	125-500 mg (15 mg/kg/dose)
Acetaminophen, butalbital, and caffeine	325 mg 1-2 tabs PO q6h
Isometheptene with acetaminophen and dichloralphenazone	1 tab PO—may repeat
Codeine	0.5mg-1mg/kg/dose q4-6h prn
Metoclopramide	5-10 mg PO/I.V.
Sumatriptan NS (Imitrex, GlaxoSmithKline)	5-20 mg NS
Sumatriptan oral (Imitrex, GlaxoSmithKline)	25 mg for wt <50 lbs; 50 mg for wt 50-100 lbs; 100 mg for wt >100 lbs
Eletriptan (Relax, Pfizer)	20 mg <100 lbs; 140 mg >100 lbs
Zolmitriptan (Zomig, AstraZeneca)	2.5 mg PO
Naratriptan (Amerge, GlaxoSmithKline)	1 mg PO
Rizatriptan (Maxalt, Merck)	5 mg PO

Table 6. Treatments for Pediatric Migraines Ranked by Severity (8=most severe)

Severity	Medication	Dose	
1	Oral triptans		
	Sumatriptan Nasal Spray (NS) (Imitrex, GlaxoSmithKline)	5-20 mg. Maximum dose: 40 mg	
	Zolmitriptan	1.25-2.5 mg. Maximum dose: 10 mg	
	Naratriptan	1 mg. Maximum dose: 2.5 mg	
	Rizatriptan	5 mg. Maximum dose: 15 mg	
	Almotriptan (Axert, Pharmacia)	6.25 mg. Maximum dose: 25 mg	
2	Frovatriptan (Frova, Elan/UCB Pharma)	2.5 mg. Maximum dose: 7.5 mg	
	Sumatriptan Subcutaneous (SQ)	2-6 mg/kg. SQ maximum dose: 12 mg; PO maximum dose: 200 mg	
	3	Oral (PO) steroids	Methylprednisolone dispenser pack
	4	I.V. hydration and I.V/IM. ketorolac	10-30 mg
	5	I.V. neuroleptics/antiemetics	
Valproate sodium injection (Depakote Injection, Abbott)		10-15 mg/kg. Maximum dose: 1,000 mg	
Metoclopramide		0.1-0.2 mg/kg/dose. Maximum dose: 10 mg	
Prochlorperazine		2.5-10 mg	
Chlorpromazine		0.5-1 mg/kg/dose. Maximum dose: 50 mg	
6	IM or I.V. dihydroergotamine mesylate (D.H.E. 45 Injection, Novartis)	Pretreat with metoclopramide 0.1 mg, then 0.1-0.2 mg q8h	
7	I.V. steroids		
	Hydrocortisone	1-2 mg/kg/dose. Maximum dose: 100 mg	
	Methylprednisolone	1 mg/kg/dose. Maximum dose: 40 mg	
	Dexamethasone	0.25-0.5 mg/kg/dose. Maximum dose: 10 mg	
8	I.V. opioids		
	Hydromorphone	0.015mg/kg/dose q4-6 h prn. Maximum dose: 1 mg	
	Oxycodone	0.05mg- 0.15mg/kg/dose q4-6 h prn. Maximum dose: 5 mg	
	Morphine	0.05mg - 0.2mg/kg/dose q2-4h prn. Maximum dose: 10 mg	
	Fentanyl	Initial Bolus: 1-2 mcg/kg. Maximum dose: 100 mcg Maintenance: Neonate 0.5-1 mcg/kg/h Infants and children: 1-3mcg/kg/h	

Table 7. Medications for Acute Pediatric Status Migrainous

	Medication	Dose	Available Dosage Forms	What to Expect	Comments
Over the Counter (OTC)	Acetaminophen	10-15 mg/kg/dose q4-6h as needed Maximum 1,000 mg per dose Maximum daily dose 4,000 mg	Tablets, gels, capsules, drops, suspensions, elixirs, solutions, and suppositories	Should begin to work in about 30 min.	Used for many pain syndromes and fevers.
	Aspirin	10-15 mg/kg/dose q4-6h, maximum 650 mg per dose, maximum daily dose 4,000 mg	Tablets, caplets, gels, capsules, chewable tablets, and suppositories	Should begin to work within 30 min. May cause stomach upset; give with food or milk to avoid upset stomach.	Used for many pain syndromes and fevers. Aspirin is not recommended for young children because of its association with Reye's syndrome, a rare but serious disorder. Increases risk of bleeding and stomach upset when used with another drug in the same class (NSAID). Avoid taking it in combination.
	Ibuprofen	7.5 mg/kg/dose q6-8h, maximum 400 mg per dose, maximum daily dose 1,200 mg	Tablets, gels, capsules, drops, suspension	Should begin to work within 30 min	May cause stomach upset; give with food or milk to avoid upset stomach. Used for many pain syndromes and fevers. Increases risk of bleeding and stomach upset when used with another drug in the same class (NSAID). Avoid taking in combination.
	Naproxen	5-7 mg/kg/dose q8-12h, maximum dose 1,000 mg	Caplet and gelcap 220 mg, contains 200 mg of naproxen and 20 mg sodium	Should begin to work within 30 min	May cause stomach upset; administer with food or milk to avoid upset stomach. Used for many pain syndromes and fevers. Increases risk of bleeding and stomach upset when used with another drug in the same class (NSAID). Avoid taking in combination.
	Caffeine	32-65 mg	Many of the OTC migraine medications contain caffeine. Caffeine is found in food and beverages such as chocolate, soda, coffee, and tea	Should begin to work within 30 min. Read labels carefully.	At high doses, caffeine can actually cause headaches. Rebound headaches can occur when caffeine is withdrawn from the diet. Can also cause sleep disturbances.
Triptans	Sumatriptan NS	5 mg, 10 mg, or 20 mg for a maximum of 40 mg/d*	5-mg and 20-mg nasal spray	Should begin to work in about 15-45 min	Has a bad taste. Gently blow nose to clear passages before use. Unusual sensations have been noted after taking triptans. These include tingling, warmth, and pressure. Drowsiness, nausea, dizziness, and weakness can also occur. Do not use in combination with each other or the ergot derivatives.
	Sumatriptan SQ	2-6 mg SQ with a maximum of 12 mg per 24 h, 25 mg and 50 mg PO with a maximum of 200 mg/d*	Injection 12 mg/mL, 25-mg, 50-mg, and 100-mg tablets	Injection should work within 10 min. Tablets take 30-60 min to work. Pain at the injection site subsides within 1h.	Take tablet with fluids.
	Zolmitriptan	1.25 mg-2.5 mg with a maximum of 10 mg in a 24-h period	2.5-mg and 5-mg tablets	Should start to work in 30-60 min. May repeat dose in 2 h if headache persists.	Duration of action is about 3 h.
	Naratriptan	Initial dose: 1 mg with a maximum of 2.5 mg in a 24-h period	1-mg and 2.5-mg tablets	Should start to work in 30-90 min	Do not use in combination with each other or the triptans. Has a long duration of action but exact time is unknown.
	Rizatriptan	Initial dose: 5 mg with a maximum of 15 mg in 24 h	5-mg and 10-mg tablets	Should start to work 30-60 min	
	Almotriptan (Axert, Pharmacia)	Initial dose: 6.25 mg with a maximum of 25 mg in a 24-h period	6.25-mg and 12.5-mg tablets	May take up to 1-2 h to work. May repeat dose after 2 h.	Has long duration of action but exact time is unknown.
	Frovatriptan (Frova, Elan/UCB Pharma)	Initial dose: 2.5 mg with a maximum of 7.5 mg in 24 h	2.5-mg tablet	May take up to 2 h to work. May repeat dose if headache persists after 2 h.	
Ergots	Dihydroergotamine	IM, SQ, I.V.: 1 mg for maximum of 2 mg/d* and 6 mg/wk; nasal spray: 1 spray in each nostril for maximum of 4 sprays/d* and 8 sprays/wk	Injection: 1 mg ampules; nasal spray: 4-mg dihydroergotamine and 10-mg caffeine per 1 mL	Given I.V. or IM. Takes 10-15 min to work. May repeat in 1 h. The nasal spray takes 15 min; may repeat after 15 min.	May cause diarrhea, muscle cramps, nausea, and paresthesia.
	Ergotamine	Oral, sublingual: 1 mg at onset of attack. Rectal: 1 suppository	Oral tablet, sublingual tablet, and suppository	Should begin to work in 15-60 min. Oral may be repeated every 30 min for a maximum of 3 mgs per attack. The suppository may be repeated once after 1 h.	May cause muscle cramps, nausea, and paresthesia. The oral tablet and suppository contain 100 mg of caffeine. Do not use in combination with other ergots or triptans. Heed caution if taking in combination with medication for depression.
NSAIDs	Naproxen	Initial dose: 5-7 mg/kg/d* every 8-12 h. Maximum dose 1,000 mg/d*	Tablet and gelcap 220 mg contains 200 mg of naproxen and 20 mg sodium	Should begin to work within 30 min. May cause stomach upset; give with food or milk to avoid upset stomach.	Used for many pain symptoms. Increases risk of bleeding and stomach upset when used with another drug in the same class (NSAID). Avoid taking in combination.
	Ketoprofen (Ketoprofen, Mylan)	No pediatric dose available. Initial adult dose: 12.5 mg every 6-8 h for a maximum of 6 tablets in 24 h	OTC: 12.5-mg tablets Prescription: 25-, 50-, 75-, 100-, 150- and 200-mg capsules	Should begin to work within 30 min. May cause stomach upset; give with food or milk to avoid upset stomach.	Used for many pain symptoms.
	Meclofenamate	No pediatric dose available. Initial adult dose: 50 mg q4-6 h for a maximum of 400 mg/d	50- and 100-mg capsules	Should begin to work within 30 min.	May cause stomach upset, give with food or milk to avoid upset stomach. Used for many pain symptoms.
	Flurbiprofen (Flurbiprofen, Mylan)	No pediatric dose available. Initial adult dose 50 mg	50-mg and 100-mg tablets	Should begin to work in 30-60 min.	Used for many pain symptoms.
	Ketorolac	0.5-1-mg/kg/dose for maximum I.V. dose of 15 mg or 60 mg/d. Orally 10 mg/dose or 40 mg/d maximum	I.V.: 15 mg/mL Tablet: 10 mg	Should begin to work in 30-60 min. May cause stomach upset; give with food or milk to avoid upset stomach.	Used for many pain symptoms.
Combination Products	Aspirin and butalbital	Not FDA approved for children and teens >16 years old. 1/2 tablet for wt 40-70 lbs; 1 tablet for wt 70-100 lbs; 1-2 tablets for wt >100 lbs. Take every q4h.	Each tablet contains aspirin 650 mg and butalbital 50 mg	Should begin to work in about 30 min	May cause drowsiness, dizziness, and light-headedness. May cause upset stomach. Avoid products that may slow your actions and reactions. These include sedatives, mood stabilizers, antihistamines, and other pain medications.
	Aspirin, butalbital, and caffeine		Each tablet contains aspirin 325 mg, caffeine 40 mg, and butalbital 50 mg		
	Acetaminophen and butalbital		Each tablet contains acetaminophen 325 mg and butalbital 50 mg		
	Acetaminophen, butalbital, and caffeine		Esgic (Forest) and Fioricet (Novartis): acetaminophen 325 mg, butalbital 50 mg, and caffeine 40 mg Esgic-Plus (Forest): acetaminophen 500 mg, butalbital 50 mg, and caffeine 40 mg		
Adjunctive Agents	Isometheptene with acetaminophen 325 mg and dichloralphenazone 100 mg	Not recommended for children <12 years old. 1 capsule for wt 70-100 lbs; 102 capsules for wt >100 lbs.	Each capsule contains isometheptene 65 mg, acetaminophen 325 mg, and dichloralphenazone 100 mg	Should begin to work in 30-60 min	May cause dizziness or skin rash.
	Metoclopramide	0.1-0.2 mg/kg/dose for a maximum of 10 mg per dose. May be repeated every 6-8 h as needed.	5- and 10-mg tablets and syrup 5 mg/5 mL	Should begin to work in 30-60 min	May cause akathisia, dizziness, and drowsiness.
	Prochlorperazine	Oral and rectal: children >10 kg, 2.5 mg every q8-12h; IM: 0.1-0.15 mg/kg/dose for max of 10mg/kg/dose..	Tablet, syrup, injection, and suppository	Oral should begin to work in 30-40 min, IM within 10-20 min	May cause dizziness, drowsiness, dystonia, and low blood pressure. Avoid products that may slow your actions and reactions. These include sedatives, mood stabilizers, antihistamines, and other pain medications.
	Dexamethasone	0.25-1 mg/kg to a maximum of 10 mg I.V.	Tablets, liquid, and I.V.	Should begin to work in 5-10 min	May cause fluid retention, acne, and stomach upset. Avoid use with antacids, erythromycin, and clarithromycin, as these may decrease the effectiveness of dexamethasone.

* /d=per day

Table 8. Medication Interactions

Medication	Interaction
NSAIDs	Should not use in combination with other NSAIDs.
Triptans	Should not use in combination with other triptans, ergots, or MAOIs. Eletriptan should not be used with proton pump inhibitors or protease inhibitors. Heed caution when using in combination with SSRIs.
Ergots	Should not use in combination ergots with other triptans.
Antidepressants	See Table 5
β- Blockers	See Table 5
Calcium Channel Blockers	See Table 5
Alternative Medications	See Table 9

Table 9. Alternative Medications for Pediatric Migraines

Medication	Effectiveness Rating (Natural Medicines Comprehensive Database)	What Is It?	How Does It Work?	Comments
Ginger	Insufficient evidence to rate	An herb whose root is used to make medicine	Contains chemicals that affect many systems in the body.	Alternative medications still may have side effects and drug interactions. Use them with the same caution as any medication.
Valerian	Insufficient evidence to rate	An herb made from the root	Seems to act like a sedative on the brain and nervous system.	
Feverfew	Insufficient evidence to rate	An herb whose leaves are used to make medicine	Contains many different chemicals including parthenolide, which may decrease factors in the body that might cause migraine headaches.	
Magnesium	Possibly effective	A mineral	Required for proper growth and maintenance of bones. Also required for proper functioning of many body parts.	
Riboflavin	Possibly effective	Vitamin B2	Required for proper development and function of many body systems.	



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