Headaches In Children: Why Worry?

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Background

• Headaches are common in children.
• 5-10% of children in the US have migraine headaches, a very specific type of headaches.
• Many more children have mild headaches.

• Many fewer children have headaches caused by serious problems such as brain tumors, hydrocephalus (water on the brain), or brain aneurysms.
• Brain tumors occur in 2500-3500 children in the US per year, compared with 5-10% of the pediatric population who suffer from migraine.

Primary vs. Secondary Headaches

• When a doctor is seeing a patient for headaches, they need to decide whether a headache is caused by something wrong with the person (secondary headache) or whether it is a headache condition that has no obvious cause (primary headache).
• In order to decide whether someone has a primary or secondary headache syndrome, a doctor needs to ask many questions and do a full medical and neurologic exam.

Headache History

• The questions the doctor asks about headaches is called a headache history.
• As follows are typical questions:
  – How long have you had headaches (days, months, years)?
  – How often do they happen (several times a year, once a month, once a week or more)?
  – How bad are they (1-10)?
  – Is there anything that makes them better or worse?
  – Does anything make them start?
  – Are there any other symptoms that come with them?
  – Where is the pain located?
  – What does it feel like?

Headache Examination

• Because headaches can be caused by other medical conditions, a doctor needs to perform a thorough medical exam as part of a headache evaluation.
• Because headaches can come with neurologic conditions, a doctor needs to perform a complete neurologic exam including looking in the back of the eyes (funduscopic exam) to rule out a serious cause.
Headache History and Exam
- An experienced physician can usually rule in or out a serious cause of headache by taking a thorough history and performing a detailed medical and neurologic exam.
- Tests like blood work and imaging of the brain are used if there are clues in the history and on the exam to suggest that the headache may be caused by a medical or neurologic problem.
- In people with typical symptoms of primary headache disorders and normal exams, testing does not usually find anything helpful in diagnosing the cause of the headache.

Examples of Common Secondary Headaches
- A 5 year old boy has headache, a very bad sore throat and a fever to 102. His doctor sees white stuff on his tonsils. His doctor orders a rapid strep (throat swab) and puts him on antibiotics.
- A 7 year old girl has trouble paying attention in school. Her pediatrician has her teachers and parents fill out questionnaires about attention and behavior. She diagnoses ADHD, inattentive type, and prescribe Ritalin (methylphenidate). For the first week she takes the medicine, she complains of headaches in the afternoon, then it stops. Her examination is normal.

Other Common Secondary Headache Causes
- Severe nasal congestion, green yellow nasal discharge, fever, post-nasal drip, bad breath, pressure headaches behind forehead-acute sinusitis
- Ear infection
- Flu (Influenza)
- Toothache
- Cold

Serious Secondary Headache Causes-Background
- The brain itself does not have pain sensors.
- Anything that causes increased pressure and stretching of the blood vessels and/or covering of the brain can cause pain.

Serious Causes- Increased Pressure
- Meningitis-infection of the spinal fluid and brain covering (meninges). This causes pain by causing inflammation and irritation of the meninges and blood vessels. The clues for this are fever, stiff neck, extreme irritability, sometimes vomiting, seizures and decreased awareness. People are generally very ill when they have this type of headache and get worse and worse unless treated.

Serious Causes- Increased Pressure
- Brain Tumor- these cause pain by stretching vessels and meninges where they are, or by preventing spinal fluid from draining (hydrocephalus) which causes stretching of blood vessels. Clues are progressive headache (getting worse and worse), blurry vision, double vision, problems with balance, weakness, seizures, changes in behavior or ability to think, vomiting. People who have these have abnormal neurologic exams very shortly after headaches start.
**Other Serious Headache Causes**

- Brain Aneurysm - a weakness in an artery wall that balloons and pops. These are extremely rare in children.
  - Clues are headaches with rapid onset of severe headache pain (within a few minutes) that very slowly fades over days to weeks, loss of consciousness, stroke symptoms.

**Concussion**

- A concussion occurs when a hit to the head causes acceleration and sudden deceleration.
  - This causes stretching of meninges, supportive brain tissue and blood vessels.
  - Most children with post-concussive headache improve within weeks to a month.
  - Occasionally, headache continues and requires treatment, either outpatient and occasionally inpatient.
  - Avoiding further head trauma is important, particularly while concussion is ongoing, to prevent neurologic injury.

**Primary Headache Syndromes**

- Tension Type Headaches
- Migraine Headaches

**Tension Type Headache**

- Most common headache syndrome
- Definition:
  - Mild to moderate
  - Front of head or temples
  - Pressure or band like pain
  - Not made worse by regular activities
  - Not associated with other significant symptoms - mild nausea or mild light or sound sensitivity

- The symptoms and a normal exam rule out a serious cause.
- Proper treatment include good sleep habits, regular healthy meals, addressing any stress issues, and occasional use of over-the-counter pain medicines.

**Migraine Headaches**

- Moderate to severe headache
- Usually in the front or at the temples in kids, sometimes the whole head.
- Often described as throbbing or pulsating-banging, like my heart beating in my head
- Made worse by routine physical activities
- Associated with light and sound sensitivity and/or nausea and or vomiting.
Migraine Headaches

- Migraine is an inherited condition.
- Migraine is underdiagnosed in both adults and children.
- There are 3 genes identified for a rare type of migraine called familial hemiplegic migraine.
- These genes make ion channels on neurons (nerve cells).

Migraine with aura

- An aura is reversible neurologic symptoms that accompany a migraine.
- Occasionally people get the aura but no headache (acephalgic migraine).
- Auras can include vision changes, weakness, numbness, trouble speaking, vertigo (sensation of spinning).
- Aura occurs in about 20% of children and adults with migraine.

Migraine Triggers

- Triggers are factors or substances that can provoke migraine people who are susceptible to them.
- Common triggers include lack of sleep, stress, dehydration, stress, nitrates, red wine, heat, menstruation.
- Many people are not able to find their specific trigger.

Migraine Treatment

- Trigger avoidance
- Biofeedback/relaxation training
- “Migraine Vitamins”
- OTC medicines
- Triptans-migraine specific as needed medications
- Migraine preventatives
When to worry

• When headaches are becoming progressively worse.
• When headaches awaken your child from sleeping.
• When neurologic symptoms such as double vision, changes in vision that are progressive, trouble with balance, or sudden change in behavior or ability to reason occurs.

When to worry

• When headaches are severe and of sudden onset.
• When headaches are accompanied by high fever, stiff neck and change in alertness.
• When headaches come with neurologic symptoms that don’t go away within an hour.

When to worry

• When your child has just had a concussion and starts to have vomiting, slurring speech, or change in alertness.

When to be concerned

• When your child has recurrent headaches that prevent activities.

What do you do?

• Talk to your child’s primary doctor.
• Keep a calendar of headache symptoms and episodes before seeing your doctor or a specialist (www.americanheadachesociety.org, free headache diary apps for iphone)
• Read on reputable websites: American Headache Society, National Headache Foundation

What to bring to a specialist visit?

• Records-everything pertaining to headaches and if your child has complicated medical problems.
• Medications
• Copies of MRIs and CT scans
• Headache Diaries
• Write down your questions beforehand so you don’t forget to ask them.
What to bring?

The better prepared you are, the more the doctor will be able to help.
• Like with computers, sometimes GIGO.

Other resources

• www.americanheadachesociety.org
• www.kidshealth.org
• www.headaches.org
• www.phoenixchildrens.com
• www.theemilycenter.com

Summary

• Headaches are common in children.
• Most children with headaches do not have a serious medical problem.
• Most of the time it is not necessary to be worried, but if your child has recurrent episodes that interfere with life, it is good to be concerned.
• Talk with your child’s doctor if you are concerned.
• If you are sent to a specialist, be a good boy scout and be prepared.

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