

## Diagnosing Childhood Headaches

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Last month we discussed the incidence of headaches in children and presented the case of a child with cervicogenic headache. In presenting such cases of patients who have a rapid response to spinal adjusting, we do not want to appear to overlook the potential for childhood headaches to be a symptom of more serious problems.

Headaches in children may be due to brain tumors or meningitis, but more commonly they are due to muscular tension or to vascular changes, such as is seen in migraine patients. To accurately differentiate between the possible etiologies, one must first perform a detailed evaluation of the onset and progression of the problem.

An accurate diagnosis of the cause of a child's headache is a task which is essential for obtaining appropriate and timely care. Younger children cannot always accurately describe their pain and so the assessment of available data is of great importance in establishing an accurate diagnosis.

### Brain Tumors

A child with a brain tumor will usually complain of headache which gradually increases over the preceding weeks or months. An exception to this pattern is seen in children with posterior fossa tumors; these children usually have a history of morning headaches with vomiting. Any child with a headache that occurs early in the morning, or that awakens the child, must be evaluated accurately for the presence of a tumor.

Headaches produced by a brain tumor are usually not as severe as those associated with migraine. The warning signs of a brain tumor may include any of the following: headaches which awaken the child or occur in the morning; headaches which are persistent and increase with Valsalva's maneuver; those associated with vomiting; or those associated with changes in behavior.

Headaches that increase with Valsalva's maneuver, e.g., coughing, sneezing or bowel movements, suggest increased intracranial pressure. Other warning signs of increased intracranial pressure or organic disease may include any of the following: change in head circumference; double vision; strabismus; Parinaud's phenomenon (inability to raise the eyes); papilledema; a child presenting with one eye closed; closing the eye or tilting the head to reduce double vision; ataxia; cafe au lait spots, or axillary freckling (neurofibromatosis).

A 1982 study found that by the 8th week after first complaining of a headache, 80 percent of children with brain tumors had signs which could be found during examination, and by 24 weeks all had abnormal examinations. Therefore, children complaining of headache of several years duration usually do not have a tumor.

### Meningitis

Meningitis is another life-threatening condition which may initially manifest as a headache. Untreated meningitis is usually rapidly fatal, and delay in treatment generally increases the chance of death or permanent sequelae. Thus, early diagnosis and treatment is essential. Ninety percent of

meningitis cases occur in children between one month and five years of age, with the first year of life being the period of greatest risk.

In the young infant, signs of irritability, lethargy, poor feeding, and restlessness may be the only indications of meningitis. Increased intracranial pressure may give rise to a bulging fontanelle and headache.

The classic signs of meningitis which might be detected during a routine chiropractic examination include headache, neck stiffness (associated with nuchal rigidity), and a positive Brudzinski sign. The Brudzinski sign is elicited in the supine position by flexing the patient's chin to the chest and observing involuntary flexing of the hips.

### Migraine Headaches

Migraine headaches can occur in children of all ages, but most are seen in children 6-10 years old. Migraines are characterized by recurrent headaches, separated by a symptom-free interval and accompanied by any three of the following: abdominal pain, nausea, vomiting, throbbing or pulsating headache, pain confined to one-half of the cranium (hemicrania), complete relief after rest, visual or sensory or motor aura, and positive family history.

Migraines usually have a distinct beginning, then increase for a period of hours, then decrease. The patient with migraine frequently will have periods of weeks without a headache. If the child refers to a throbbing or pounding in the head, then the headache is probably vascular in nature.

Classic migraine usually begins with a prodromal aura due to intracranial vasoconstriction, during which the child experiences loss of function, e.g., loss of vision, scintillating scotomas, hemianopsia, dysesthesia, and motor function or loss. After the aura ceases, extracranial vasodilation takes place and a throbbing, nauseating headache follows, usually contralateral to the motor or sensory symptoms. The child usually has loss of appetite, becomes a photophobic and/or audiophobic, and needs to sleep. The headache is usually gone upon waking.

### Muscle Tension Headaches

Muscle tension headaches or cervicogenic headaches are characterized by their consistent frequency, that is, the patient will report having a headache every day or two for several years. A patient reporting a headache, which is like a band squeezing around the head, most likely has tension headache. These are the most common headaches seen by chiropractors and usually respond rapidly to manipulation of the upper cervical spine.

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