

SECTION VI

Headaches in Children and Adolescents

Chapter 129

History and Examination of Infants, Children, and Adolescents with Headaches

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To obtain an accurate headache diagnosis in children and adolescents, it is necessary to conduct a thorough evaluation. The evaluation should include a detailed history as well as general and neurologic examinations. The differential diagnosis should be formulated identifying the type of headache and its likely cause. Diagnostic studies may need to be performed to rule out secondary headaches or life-threatening disorders (10). The evaluation varies depending on the age of the child and headache disability.

HISTORY

The history determines the accurate diagnosis; thus, questions need to be directed to both the child and parent (2,4,10). Children can provide useful information if questions are phrased appropriately. It is recommended to also obtain a separate interview with the adolescent patient. The physician should also note the interaction between patient and parent as it often reflects problems and conflicts not directly noted (10).

Chronic pain may be associated with anxiety and depression. Chronic pain may impact eating, sleeping, and playing. Emotional, behavioral, and personality factors assume even more importance as the child becomes an adolescent (10).

The history assesses the headache and its course over time. Headache calendars can be quite useful (7) and are extremely valuable for determining accurate headache frequency, severity, and disability (Table 129-1). They can demonstrate patterns of headache occurrence that may not be otherwise apparent. Triggers can be identified if the appropriate information is recorded. Pertinent information recorded on the calendar includes time of onset of the headache, the occurrence of any aura symptoms, and an assessment of the pain intensity, quality, and location. A visual analog scale may be included, making it easier for the younger patients to use. Associated symptoms, including photophobia, phonophobia, nausea, and vomiting, are also recorded. Patients then record the treatment, noting the time, medication, and dose used. Headache disability is assessed by determining if the headache interfered with activities. For many children, sleep deprivation is a significant trigger and attendance at sleepovers may precipitate a significant headache the following day. When completed, either by the parent or the child, the calendar gives an accurate picture of the child's headache history (11). Symptoms of progressive neurologic dysfunction should be noted, along with the family history, past medical history, growth and development, review of systems, allergies, present and past medications, and educational and psychosocial status (10).

Family History

A comprehensive collection of data regarding other family members with headache and a family history of hypertension, allergy, collagen vascular disease, epilepsy, tumor, and neurocutaneous disorders may be useful (10).

Medical History

Prenatal, labor and delivery, and growth and development problems; previous injuries (especially head injuries), operations, and hospitalizations; serious illnesses; drug allergies; current medications; use of illicit drugs or alcohol; convulsions; or other neurologic problems should be

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TABLE 129-1 Headache Calendar

Date
Time of onset
Any warning symptoms
Pain—scale (0–10)
Rating
Location
Other symptoms
Treatment
Time
Medication
Dose

obtained (10). A review of organ systems is necessary to establish whether they are causing the headaches. Hypertension, sinus infections, chronic pulmonary problems, heart murmurs, eye infections, chronic ear infections, allergies, epilepsy, diabetes, or head trauma may be the source of the headaches (8,10). The educational status and school performance needs to be reviewed: is the patient missing school due to headaches? Is the patient home schooled? Emotional factors are critical: has there been a change in behavior or depression? Drug usage should also be considered (5,10). Divorce, abuse, recent deaths in the family, and peer suicide also may lead to headache.

Symptoms of depression, which include sadness, tearfulness, withdrawal from activities, hopelessness and helplessness, need to be addressed (5,10).

PHYSICAL EXAMINATION

The physical examination should be comprehensive as well as focused to address the tentative diagnosis (1,3,10). Fever may indicate an infectious process. Elevated blood pressure can cause headaches. If the child's height and weight are significantly above or below the average, consider a pituitary or hypothalamic disorder. Conditions such as asthma and their medications may play a role in the pathogenesis of headache. Petechia may indicate a blood dyscrasia (10). Striae may indicate Cushing disease or illicit use of steroids (10). Five or more café-au-lait spots may implicate neurofibromatosis; the presence of a butterfly rash, vasculitis; and organomegaly, a systemic neoplasm (10). Headache may be a nonspecific symptom of disease in any organ system.

NEUROLOGIC EXAMINATION

The neurologic examination takes into account the response to questions, and ability to carry out commands are part of the mental status examination. Confusion and depression can be identified prior to the formal neurologic examination (6,9,10).

Head circumference should be measured. If significantly enlarged, familial macrocephaly, compensated hydrocephalus, and neurofibromatosis are possibilities. The presence of an asymmetric machinerylike cranial bruit may indicate an underlying vascular abnormality (10). Localized areas of scalp tenderness or fluid may indicate trauma. The cranial nerve examination should be adjusted, depending on the age and cooperation of the patient. In young or uncooperative children, the funduscopic examination should be performed at the end of the neurologic examination. Optic atrophy, hemorrhage, diminished visual acuity, or abnormal eye movements indicate a need for further testing (10). If dysfunction or asymmetry is found during the motor, sensory, or cerebellar examination, a pathologic process should be suspected.

Gait abnormalities can be seen in hemiparesis, ataxia, or hysteria. Posterior fossa lesions will cause a wide-based, unsteady gait. Difficulty arising from a knee bend indicates proximal weakness (10). In patients with tension-type or migraine headache, the general physical and neurologic examinations are normal.

CONCLUSION

Upon completion of the history, physical examination, and workup when appropriate, the specific headache type should be confirmed. Initial management should include headache education and nonpharmacologic strategies as well as an acute pharmacologic and, when appropriate, preventive treatment plan. A follow-up visit in 4 to 6 weeks is suggested when appropriate. During the follow-up, the headache history should be reviewed. If the headache character is changing or if new neurologic symptoms or signs are reported, neuroimaging or other testing as appropriate may be obtained (10). Further follow-up visits will be dictated by the treatment strategies and the patients' response.

In the majority of infants, children, and adolescents, a thorough history and complete physical and neurologic examinations will identify the headache type (10).

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