Editorial

Headaches: An Area of Special Responsibility for Family Practice

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Headache is an almost universal experience and can become a debilitating problem for many patients. The incidence of migraine, one of the most common types of headache, has increased considerably in recent years according to the Centers for Disease Control and Prevention. From 1980 through 1989 the prevalence of migraine in the United States increased nearly 60%, from 25.8 per 1000 persons to 41.0 per 1000 persons.[1] Furthermore, it appears that many of these headaches are being missed clinically. In a recent multicenter headache study, 60% of women and 70% of men in a group of 23,611 migraine sufferers selected by a nationwide household survey reported that they had never had migraine diagnosed, although the survey revealed that they clearly had migraine symptoms.[2] These findings are of special significance to family physicians who are the doctors most likely to be consulted first by patients with headaches.[3]

Headache patients are usually seen by a physician either between attacks when they want a prescription refilled and no headache is present, or during an attack when a clear history may be unobtainable. In both circumstances diagnosis can be difficult. When confronting an acute headache, the doctor may be entering a "diagnostic minefield."

For years diagnosis has been plagued by ambiguity in headache definition. A 1962 National Institute of Health ad hoc committee attempted to clarify the situation by creating a headache classification system.[4] They defined classic and common migraine headache, "tension headache," "mixed headache," "cluster" headache, and others, and these definitions remained the standard for many years. Recently these definitions have been criticized as being too broad and imprecise, thus allowing too much discretion to the individual physician in making a diagnosis. After consulting many headache specialists, in 1988 the International Headache Society (IHS) published a new and more explicit classification of 129 different types of headache and head and neck pain.[5] This admirable effort provides an excellent reference source for the headache expert, but it is hardly suitable for routine use. In the headache study reported in this issue of the Journal,[6] Becker and his colleagues found that the classification was too cumbersome and too detailed for routine use. A more user-friendly diagnostic classification that would be of more practical value to the busy practitioner is needed.

Headaches may be broadly classified as primary or secondary. Primary headaches, such as migraine, tension, and cluster, are those without underlying anatomic or histologic pathology. Secondary headaches are caused by underlying disease such as meningitis, tumor, hemorrhage, increased intracranial pressure, or giant-cell arteritis. A diagnosis of primary headache requires the prior exclusion of a secondary headache. A previously diagnosed primary headache does not mean that a patient is immune to developing a secondary headache. Therein lies the challenge for the practitioner, a challenge that the two Ambulatory Sentinel Practice Network (ASPN) studies in this issue of the Journal begin to explore.[6,7]

Edmeads has developed a useful clinical checklist to exclude the possibility of a secondary headache.[8] He lists the following danger signals: headache of extraordinary severity ("my worst headache ever"); onset of headache with exertion (suggestive of subarachnoid hemorrhage or increased intracranial pressure); decreased alertness or cognition; nuchal rigidity suggesting infection or blood in the spinal fluid; abnormality in vital signs including fever; and worsening of headache while under observation. According to Edmeads, who is a neurologist and eminent headache specialist, a complete neurological examination is not necessary when evaluating patients with headache in primary care. The pupils, fundi, and facial symmetry give neurological clues, as does testing the

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deltoids, handgrips, hip flexors, and ankle dorsiflexors for power. Tendon reflexes of the biceps, knee jerks, plantar response, finger–nose test, and observation of gait complete the examination. All of these tests can be performed within the time usually allotted for a routine office visit. A positive finding on any one of the above tests should prompt further investigation.

Should an acute subarachnoid hemorrhage be suspected, a computerized tomography (CT) scan without contrast is the preferred investigation and is able to identify 85% to 90% of cases.[9] It is speedier to perform than magnetic resonance imaging (MRI), and this may be important if the patient is unstable. A CT scan is more sensitive in detecting blood in the first several hours and is less costly.[10] An MRI is more sensitive in detecting acute strokes, particularly brain stem and cerebellar infarcts and smaller lesions as well as older collections of blood. Both CT scan and MRI can reveal hydrocephalus and most lesions large enough to produce headache as a result of increased intracranial pressure.[11] Lumbar puncture will detect meningitis as well as the 10% to 15% of subarachnoid hemorrhages missed by imaging. It is indicated only if there are no focal neurological signs or papilledema suggesting a mass lesion. A sedimentation rate should be determined to exclude giant-cell arteritis in the older patient with headache and tenderness over the temporal artery.

Although the physicians in the ASPN study were very selective in their use of CT scans, they found few positive findings. Only 14 (5%) of 293 CT scans detected clinically significant and potentially treatable abnormalities. Furthermore, false-positive CT scans and irrelevant findings caused delays in treatment and increased cost because of the follow-up investigations necessary. The authors emphasize that, although headaches in primary care patients are rarely caused by a brain tumor, subarachnoid hemorrhage, or subdural hematoma, their occasional occurrence and devastating consequences make it impossible to dismiss them from consideration. Because of this ever-present threat of serious disease, pressure from patients requesting CT scans, and physician malpratice anxiety, CT scans and MRI of the head will continue to be performed frequently in the evaluation of new headache. Overuse of these costly and time-consuming tests may be reduced if indications such as those recommended by Edmeads are adopted.

Headache management is an area of special responsibility for family practice and it is gratifying to see studies from family practice in the Journal that deal with this important topic. Wide-scale improvement in headache care can only occur if family physicians put to good use the increasing clinical information now available for improved diagnosis and treatment. Good overall standards of care, which are already basic to family medicine, are the essential components of effective headache care. An empathic approach by the physician and careful history-taking and examination lead to a correct diagnosis and appropriate treatment that makes most headaches controllable.[12]

References

1. Prevalence of chronic migraine headaches: United States 1980–1989. MMWR 1991; 40(20):331–8.
2. Lipton RB, Stewart WF, Celentano DD, Reed ML. Undiagnosed migraine headaches: a comparison of symptom-based and reported physician diagnosis. Cephalalgia 1991; 11(Suppl):89–90.
3. Linet MS, Stewart WF, Celentano DD, Ziegler D, Sprecher M. An epidemiologic study of headache among adolescents and young adults. JAMA 1989; 261:2211–6.
4. Ad Hoc Committee on Classification of Headache. Classification of headache. JAMA 1962; 179:717–8.
5. Headache Classification Committee of the International Headache Society. Classification and diagnostic criteria for all headache disorders, cranial neuralgias and facial pain. Cephalalgia 1988; 8(Suppl 7):1–96.
6. Becker LA, Green LA, Beaufait D, Kirk J, Froom J. Use of CT scans for the investigation of headache: a report from ASPN, Part 1. J Fam Pract 1993; 37:129–34.
7. Becker LA, Green LA, Beaufait D, Kuk J, Froom J. Detection of intracranial tumors, subarachnoid hemorrhages, and subdural hematomas in primary care patients: a report from ASPN, Part 2. J Fam Pract 1993; 37:135–41.
8. Edmeads J. Challenges in the diagnosis of acute headache. Headache 1990; 30(Suppl):537–40.
9. Scotti G, Ethier R, Melanen D, et al. Computed tomography in the evaluation of intracranial aneurysms and subarachnoid hemorrhage. Radiology 1977; 123:85–90.
10. Edelman R, Warach S. Magnetic resonance imaging. N Engl J Med 1993; 328:708–16.
11. Bryan RN, Levy LM, Whitlow WD, et al. Diagnosis of acute cerebral infarction: comparison of CT and MR imaging. Am J Neuroradiol 1991; 12:611–20.
12. Smith R. Chronic headaches in family practice. J Am Board Fam Pract 1992; 5:589–99.