Editorials

Hard-to-Diagnose Headache: Practical Tips for Diagnosis and Treatment

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The article by Hainer and Matheson in this issue of *American Family Physician* provides a thorough review of the presentation of adult headache, including recognition of cluster headache and workup of the emergent headache.[1]

The challenge for physicians is to be aware of the red flag symptoms that identify dangerous headaches, and be able to diagnose and treat a headache that has no focal neurologic abnormalities or warning signs, or is a new, different, persistent, or concerning headache. Even when a life-threatening emergency has been ruled out, the patient is often left with a headache that severely affects his or her quality of life. For example, an older woman who had been experiencing disabling right-sided headaches for years was told that the headaches were migraines, and given pain medication. The patient's history included autonomic disturbances that occurred during the headaches, such as lacrimation and restlessness. The patient was diagnosed with cluster headache and successfully treated with oxygen, significantly improving her quality of life.

The following tips may be useful in evaluating and treating patients who present with a headache that is difficult to diagnose:

- It is crucial to not miss a subarachnoid hemorrhage. A detailed history is key in the diagnosis of this condition. Many patients with subarachnoid hemorrhage have had milder sentinel or warning headaches in the previous two weeks.[2,3] Proper diagnosis involves consideration of a broad range of etiologies, understanding test limitations, using computed tomography and lumbar puncture as needed, and close follow-up.[4]
- Rule out possible adverse effects caused by medications. For example, selective serotonin reuptake inhibitors and oral contraceptives are known to cause severe headaches.[5,6]
- Unusual presentations include cluster, SUNCT (short-lasting, unilateral, neuralgiform headache episodes with conjunctival injection and tearing), daily episodic, and stabbing headaches.[7,8] Check the patient's symptoms against the International Headache Society's diagnostic criteria.[9] Accurate diagnosis may expand the number of treatment options (e.g., oxygen therapy for cluster headaches).
- Advise patients to keep a headache diary.[10] In addition, multiple applications are available for mobile or handheld devices, some of which use the International Headache Society's diagnostic criteria to assist with diagnosis and tracking symptoms, duration, severity, triggers, and medications.[11]
- Engage the patient in a thorough investigation of possible headache etiologies and triggers.[12] Triggers include not eating regularly, hypoglycemia, sexual intercourse, caffeine withdrawal (often on weekends),[13] bright sunlight, tight ponytail holders,[14] dehydration,[15] and focal muscle tension (e.g., caused by extensive computer use, fear, sleeping positions, lifting weights). Food and substance triggers can include monosodium glutamate, tyramine, aspartame, alcohol, phenylethylamine, nitrates, and nitrites.[16]
- Encourage patients to experiment with behavioral changes such as eating regularly, monitoring variable caffeine intake, wearing a hat and sunglasses when outdoors, or preparing their sleeping environment (e.g., choosing a comfortable pillow). Teach patients to recognize the early signs of a headache and to act immediately to modify their behavior before the headache becomes severe.
- Explore nonpharmacologic treatments such as head massage, biofeedback, and acupuncture.[17-20] By discovering useful nonpharmacologic interventions, patients may feel less helpless and be more willing to try these approaches, with pharmacologic treatments available as backup if needed.
- Use evidence-based treatments (e.g., oxygen therapy for cluster headaches[21]; propranolol, biofeedback, and cognitive behavior therapy for preventing migraines[22]; and a combination of aspirin, acetaminophen, and caffeine for premenstrual migraine[23]). Supplements found to have some evidence of effectiveness for migraine include magnesium, butterbur, coenzyme Q10, and riboflavin.[17,24,25]
- Consider and treat comorbidities and systemic diseases including depression, anxiety, autoimmune disorders, vasculitis, and temporal arteritis.[26] Chronic morning headaches may be associated with anxiety and depression, insomnia, sleep apnea, hypertension, musculoskeletal conditions, and use of anxiolytics and alcohol.[27]
- A transdisciplinary team approach, including cognitive behavior training, progressive relaxation, exercise, education, biofeedback, psychology, and neurology, is

more effective than management by a single physician.[28] A prospective study of this approach resulted in decreased medication use and increased use of nonpharmacologic modalities.[29] A team approach involving physicians, nurses, physical therapists, and psychologists may be effective in treating headaches caused by medication overuse, which is the third most common headache diagnosis.[30] Medication overuse headache is caused by excessive use of triptans, ergot, caffeine, and analgesics, and can significantly affect a patient's quality of life. Recommended treatment has been a combination of withdrawal and prophylaxis for the original headache, but the relapse rate is 25 to 30 percent.[31]

- Close follow-up is needed to maintain patient trust as diagnostic, behavioral, and pharmacologic therapies are explored.

The difficult-to-diagnose headache can be a source of frustration to the patient and physician. A stepwise individualized approach that includes thorough diagnosis, applies underutilized but proven treatments, and explores nonpharmacologic approaches in partnership with the patient, can help the physician and patient feel more empowered. Building trusted continuity relationships using a patient-centered model to address serious chronic problems such as headache is what family physicians do best.

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