Expert Opinion

Management of Basilar Migraine

Case History Submitted by Randolph W. Evans, MD
Expert Opinion by Steven L. Linder, MD

Key words: basilar migraine, triptans

Abbreviations: BAM basilar artery migraine

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CLINICAL HISTORY

A 16-year-old adolescent girl presents with a 3-year history of recurrent and stereotyped headaches with associated focal neurologic symptomatology. She typically develops visual "blurring" and horizontal diplopia (without dysarthria, vertigo, tinnitus, decreased hearing, ataxia, paresthesias, paresis, or altered consciousness), lasting about 30 minutes and followed by "pounding" headache at the vertex, with nausea and light sensitivity; her headache and accompanying symptoms cease about 4 hours after taking Fiorinal #3. The only possible trigger is stress. The episodes often awaken her from sleep. She has been having about two attacks per month. She has been on an oral contraceptive for 1 year for acne. Past medical history is otherwise negative. Her father has migraines. Neurologic examination is normal.

Questions.—Does this represent basilar migraine? Would administration of an oral triptan at the onset of the headache be safe? Are there risks in continuing the oral contraceptive? What preventative medication would you recommend? Are β-blockers contraindicated?

EXPERT COMMENTARY

Bickerstaff described the entity of basilar artery migraine (BAM) to involve recurrent headache attacks with aura symptoms referable to the brain stem and cerebellum and parietal and inferior temporal cortices.[1] The International Headache Society (IHS) has accepted BAM as a migraine variant (diagnostic code 1.2.4).[2] To fulfill the diagnostic criteria, a patient must have two or more of the aura symptoms listed in Table 1; the symptoms must clearly originate from the brain stem or from both occipital lobes.

This patient has blurring of vision and diplopia, thus fulfilling the criteria for BAM (unless her blurring of vision is retinal in origin). Even though unusual in this situation, one should consider alternative diagnoses such as benign occipital epilepsy of childhood; thus a sleep-deprived electroencephalogram (EEG) with photic stimulation, with eyes both opened and closed, should be performed. Magnetic resonance imaging (MRI) and magnetic resonance angiography (MRA) should also be considered. Excessive use of caffeine, barbiturates, or other agents (both legal and illegal) must be excluded.

This patient has only been using butalbital, caffeine, and acetaminophen with codeine twice a month, and this is not excessive. An alternative treatment for acute headache would be isometheptene with or without a nonsteroidal anti-inflammatory drug (NSAID). If in 1 hour there was no improvement, then a bultalbital-containing compound could be taken, but codeine would be best avoided. The triptans have not been adequately studied in BAM, especially in adolescent patients. Klapper et al described several such cases, and preliminary reports have suggested that these medications are safe as well

Address all correspondence to Dr. Randolph W. Evans, Suite 1370, 1200 Binz, Houston, TX 77004 or Dr. Steven L. Linder, Medical City Dallas, Suite A307, 7777 Forest Lane, Dallas, TX 75230-2505.

Table 1.—Basilar Migraine: Symptoms

Visual symptoms in both the temporal and nasal field of both eyes
Dysarthria
Vertigo
Tinnitus
Decreased hearing
Double vision
Ataxia
Bilateral paresthesias
Bilateral paresis
Decreased level of consciousness

Table 2.—Blood Tests for Detection of the More Common Prothrombotic Disorders

Prothrombin time and platelet count
Activated protein C resistance
Anticardiolipin antibodies/titers
Antithrombin III
Lupus anticoagulant (dRVVT)
Protein C (functional)
Protein S (functional)
Platelet function studies (rule out "sticky platelet syndrome"[4])
Serum homocystine
Prothrombin gene mutation
Factor V Leiden

as effective.[3] We have seen patients using triptans for "routine migraine" who on closer review have had BAM; they have tolerated triptan therapy without obvious adverse events. Even so, at this time one cannot recommend the use of triptans in patients with BAM unless all other mediations fail and the patient and family are advised of the potential risk.

This patient has been on birth control pills for 1 year, and it would be important to know whether initiation of oral contraceptive pill (OCP) use was followed by an increase in the number of headaches or severity of her headaches or amplified her associated symptoms. It may also be important to know whether her headaches occur in conjunction with her menses or if there is any personal or family history suggestive of a prothrombotic disorder; tests to exclude the more common of these disorders are listed in Table 2. If OCP use has had no adverse clinical impact on the patient's BAM and there is nothing to suggest a prothrombotic disorder, then the patient can continue on an OCP, preferably a preparation with the lowest possible estradiol concentration (20 μg).

Preventative medications commonly are used when patients are having two or more severe migraine headaches per month. At the present time, there is no acceptable "standard of treatment" for migraine prophylaxis in patients who have BAM. There is largely anecdotal evidence that BAM may be aggravated by treatment with β-blockers, even to the point of precipitating ischemic strokes.[5] I personally start with a calcium channel blocker such as verapamil. Flunarizine would be a very acceptable alternative, but unfortunately this drug is not available in the United States.

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