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NATIONAL HEADACHE FOUNDATION:

Standards of care for treating headache in primary care practice

KEY POINTS:

The level of impairment in patients with chronic headache is comparable to that of patients with congestive heart failure or recent myocardial infarction.

Prophylactic drugs can minimize frequency but do not prevent all headaches. Patients should be aware that breakthrough headaches can occur and can be treated.

Biofeedback has been shown to be an excellent treatment in long-term management of migraine and tension-type headache.

Since patients with primary headache can experience superimposition of secondary headache, they should be reevaluated if their symptoms suddenly deviate from an established pattern.

Diagnostic tests such as blood studies, computed tomography, and magnetic resonance imaging yield relatively little useful information in the primary care setting.

ABSTRACT: The following is a summary of guidelines created under the auspices of the National Headache Foundation, in an effort to improve the care of headache patients in primary care practice. The guidelines represent the consensus of an advisory panel of practitioners chosen by the NHF for their expertise in four specialty areas. A complete set of the guidelines can be obtained by calling the National Headache Foundation at 1-800-843-2256 or by writing to them at 428 W. St. James Pl., 2nd floor, Chicago, IL 60614-2750; the cost is $10.

Today, physicians are equipped with a greater understanding of the pathophysiology of headache and a larger arsenal of drug and nondrug treatments, allowing them to control headache symptoms in up to 95% of patients. To assist primary care practitioners in restoring functional capacity in their patients with chronic headache, the National Headache Foundation consensus panel developed the guidelines outlined in the pages below. These guidelines target the following areas:

Diagnosis to rule out secondary headache and establish a primary headache diagnosis through appropriate screening techniques and diagnostic testing;

Therapy to tailor nonpharmacologic and pharmacologic approaches to symptoms, medical history, lifestyle, and needs of the individual;

Referral to recognize indications for appropriate, timely referrals to specialists in headache care; and

Long-term management to minimize pain, reduce disability, and improve quality of life.

WHY ARE STANDARDS OF CARE FOR HEADACHE NEEDED?

Headache is one of the most frequent disorders encountered in outpatients. Over 45 million Americans from all walks of life have some form of recurrent headache, and reports indicate this number is steadily rising.

Quality of life comparable to that in myocardial infarction, heart failure

Quality-of-life studies have shown that chronic headache causes much more morbidity and impairment of function than has been appreciated. The level of impairment (measured by generic quality-of-life instruments) is comparable to that of patients with congestive heart failure or recent myocardial infarction. This level of dysfunction reflects not only the pain itself, but also absence of control over attacks, fear of future attacks, and lost productivity both at home and at work.

Not only pain, but also absence of control over attacks, fear of future attacks, and lost productivity reduce quality of life

Disability costs billions

For the employed sector of people with migraine, disability is believed to cost employers between $5.6 to $17.2 billion each year for 157 million days lost from work. For the headache population at large, American business loses an estimated $50 billion per year to absenteeism and payment of medical benefits. Billions more are spent on physician appointments, emergency room visits, laboratory and radiographic studies, and medications.

DIAGNOSIS: ARE THE HEADACHES PRIMARY OR SECONDARY?

In 1988, the International Headache Society (IHS) established criteria for diagnosing primary headache disorders according to four categories: migraine without aura, migraine with aura, chronic tension-type headache, and cluster headache. Although the IHS criteria are generally accepted as a basis for diagnosis, headache disorders manifest a spectrum of activity. For example, a complete history may reveal that a patient who suffers from migraine without aura experiences either photophobia or phonophobia, but not both symptoms as listed in the criteria statements. Such departures are not uncommon and indicate a need for the primary care physician to view them in the context of the larger clinical picture.

In classifying headache disorders, further subdivision of all types into primary and secondary headache is diagnostically and therapeutically beneficial.

Primary headaches are benign, often recurrent, and not associated with known underlying pathology.

Secondary headaches are of pathologic origin; these headaches may require immediate action.

The initial objective in evaluating a patient with headache is to categorize the headache as primary or secondary. Additionally, since patients previously diagnosed with primary headache can experience superimposition of secondary headache, it is prudent to reevaluate patients whose symptoms suddenly deviate from an established pattern.

Initial screening

The challenge of diagnosis is to dissect, extract, and organize relevant features of the clinical picture into a diagnostic scheme. To that end, the value of the physician-patient relationship cannot be overestimated. A patient who feels that his or her condition and concerns are approached with respect and understanding is much more likely to provide complete and relevant information than one met with bias and skepticism.

A thorough history is the single most useful tool for defining diagnosis and initiating management.

The physical examination helps confirm diagnostic information collected from the history, and may also provide evidence of neurologic or other organic disorders (TABLE 1).

Danger signs indicating further evaluation (TABLE 2) may alert the physician to the possibility of a more serious or life-threatening disorder.

Diagnostic testing

Although diagnostic tests such as blood studies, computed tomography (CT), and magnetic resonance imaging (MRI) yield relatively lit-

TABLE 1

KEY ASPECTS OF THE PHYSICAL EXAMINATION FOR HEADACHE

Observe and palpate the head for signs of trauma or tenderness and adequacy of temporal artery pulses
Assess cranial nerves; include funduscopic evaluation
Examine oral cavity for dental disorders, tongue for midline positioning, palate for symmetrical movement
Assess temporomandibular joints for alignment, ease of mobility, "clicking"
Palpate neck for lymphadenopathy, thyromegaly; auscultate over carotids
Assess cervical motion for meningeal irritation or spinal abnormalities
Palpate suboccipital and sternocleidomastoid areas for "trigger points"
Assess muscle strength in upper extremities (biceps, triceps, hand grip) and in lower extremities (leg extension, flexion; ankle and toe dorsiflexion)
Assess tactile sense with pinprick to face, hand, foot
Test deep-tendon reflexes of arm, knees, ankle; Babinski response
Examine ears, throat, lungs, heart, abdomen for systemic disease
Screen for postural abnormalities, skeletal asymmetry, scoliosis, spasm, additional trigger points in shoulders and back

TABLE 2

"RED FLAGS" IN THE DIAGNOSIS OF HEADACHE

Onset of headache after age 50
Onset of new or different headache
"Worst" headache ever experienced
Onset of subacute headache that progressively worsens over time
Onset of headache with exertion, sexual activity, coughing, or sneezing
Headache associated with any of the following changes in neurological evaluation:
Drowsiness, confusion, memory impairment
Weakness, ataxia, loss of coordination
Numbness or tingling in extremities
Paralysis
Sensory loss
Asymmetry of pupillary response, deep tendon reflexes, or Babinski response
Signs of meningeal irritation
Progressive visual or neurological changes
Persistent tinnitus
Loss of sense of smell
Loss of sensation over the face
Dysphagia
Abnormal medical evaluation
Fever
Stiff neck
Hypertension
Weight loss
Tender, poorly pulsatile temporal arteries
Papilledema
Chronic cough
Lymphadenopathy
Recurrent nasal drainage or discharge
Other evidence to suggest systemic illness

tle useful information in the primary care setting, their use has become increasingly routine. Most patients seen in primary care have primary headache disorders, about which these studies provide little objective data. Therefore, in general, these studies are not warranted if both physician and patient are comfortable with a diagnosis of primary headache disorder—a diagnosis that can be formulated only if a thorough history and physical examination finds nothing remarkable.

If, however, the physician or patient is not confident in the diagnosis, or if danger signs are evident, testing may help to distinguish primary from secondary headache.

Blood tests are generally not indicated in a headache evaluation. Exceptions include:

- Complete blood counts to screen for headaches caused by infections or other diseases.
- Erythrocyte sedimentation rate (ESR) or C-reactive protein determinations in older patients to screen for giant cell (temporal) arteritis.

CT, MRI, and blood tests are usually not needed

Electroencephalography (EEG) has not been shown to effectively identify headache subtypes or headaches caused by structural defects. Therefore, its routine use in headache evaluation is not warranted. However, EEG may be warranted in headache patients with alteration of consciousness, syncope, head injury, or organic brain syndrome.

Lumbar puncture is useful in detecting several conditions:

- Subarachnoid hemorrhage. (Lumbar puncture may reveal this condition before imaging studies do.)
- Meningitis or other infectious diseases of the central nervous system.
- Idiopathic intracranial hypertension (pseudotumor cerebri).
- Low cerebrospinal fluid pressure.

A funduscopic examination and a non-

TABLE 3

USE OF COMPUTED TOMOGRAPHY AND MAGNETIC RESONANCE IMAGING IN THE DIAGNOSIS OF HEADACHE

Neuroimaging procedures may be indicated when *any* of the following is present:

- Decreased alertness or cognition
- Onset of pain with exertion, coitus, coughing, or sneezing
- Worsening under observation
- Nuchal rigidity
- Focal neurological signs
- First headache in patient older than 50 years
- Worst headache ever experienced
- Headache not fitting a defined pattern

Neuroimaging procedures may not be indicated when *all* of the following are present:

- History of similar headaches
- Normal vital signs
- Alertness and cognition intact
- Supple neck
- No neurological signs
- Improvement in headache without analgesics or abortive medications

contrast CT scan should be performed before lumbar puncture to rule out significant elevation of central nervous system pressure or space-occupying lesions.

Neuroimaging procedures. TABLE 3 lists general guidelines for the use of CT and MRI. Currently, there is little conclusive information to recommend one procedure over the other. Exceptions include the preferential use of:

- CT without contrast for detecting subarachnoid hemorrhage.
- MRI for detecting posterior fossa disease, as manifested by headaches induced by exertion, coitus, coughing, or sneezing.
- MRI in conjunction with magnetic resonance angiography for visualizing aneurysms or other vascular lesions.

Infrared thermography has been used to study vascular phenomena associated with headache and has revealed findings of interest for further investigation. However, it does not help identify headache subtypes, guide headache management, or provide enough reliable characterizing data about neurologic dysfunction or deficits to warrant its use in headache evaluation.

Transcranial Doppler ultrasonography has not established its value in evaluating patients with headache and is therefore not warranted.

MANAGING PRIMARY HEADACHE

Management of primary headache has three interrelated objectives: minimizing symptoms, reducing disability, and improving quality of life.

Ideally, safe and effective therapies would accomplish all three objectives. In practice, however, headache management is often complicated, for a variety of reasons. Symptoms may wax and wane throughout life, mild and easily controlled in one stage, and completely debilitating in the next. Therapies chosen in one set of circumstances may be ineffective or inappropriate in another.

Symptoms may wax and wane throughout life— mild and easily controlled in one stage, completely debilitating in the next

Choosing the right therapy for the individual patient

There are still no cures for chronic headache, nor is there one "right" drug or other solution for every headache sufferer or for every type of headache. Finding out what works for an individual patient is a matter of trial and error—a fact that can be no less frustrating for the physician than for the person suffering the consequences of a failed trial. Though it is impossible to predict how effective a therapy will be until it is tried, one can estimate its safety and desirability by thoroughly evaluating a patient's medical history and lifestyle.

For example, suppose two patients respond equally well to the prophylactic use of a beta blocker. If, however, one of them is a professional athlete, possible adverse effects on athletic performance would likely preclude this choice. Similarly, an opiate, muscle relaxant, or other central nervous system depressant might be a poor choice for a patient who must operate machinery or provide child care.

Using these and other relevant factors (TABLE 4) as the basis for therapeutic selections, one can reduce the margin of selection error

TABLE 4

DATA NECESSARY TO INDIVIDUALIZE THERAPY FOR HEADACHE

What is the patient's age, weight, and gender?

Does the patient have other physical, medical, or psychiatric disorders?

What prescription and over-the-counter medications does the patient take?

What is the patient's reproductive status?
- Is the patient concerned about compromising libido or fertility?
- Is the patient pregnant?

Does the patient have known drug sensitivities?

What time of day do headache attacks occur?

Does the headache develop slowly, begin abruptly, or awaken the patient from sleep?

Are headache attacks associated with menses or ovulation?

Where do the attacks occur?

Does each attack create the same level of disability?

Does the patient work? If so, does work involve operation of dangerous machinery?

Does the patient have child care responsibilities?

Is the patient an athlete or does he or she participate in recreational activities that involve strenuous physical exercise or use of dangerous equipment?

TABLE 5

FACTORS THAT MAY INFLUENCE ONSET OR SEVERITY OF MIGRAINE SYMPTOMS

Physical
- Menses, ovulation, pregnancy
- Birth control pills, hormone replacement therapy (progesterone)
- Illness
- Intense or strenuous activity or exercise
- Sleep (too much, too little, jet lag)
- Fasting, missing meals
- Bright or flickering lights
- Excessive or repetitive noises
- Odors, fragrances, tobacco smoke
- Weather, seasonal changes
- High altitudes
- Medications

Dietary
- Chocolate
- Sour cream
- Ripened cheeses
- Sausage, bologna, pepperoni, salami, summer sausage, hot dogs, pizza
- Chicken livers, pâté
- Herring, pickled or dried
- Any pickled, fermented, or marinated food
- Monosodium glutamate (found in soy sauce, meat tenderizers, seasoned salt)
- Freshly baked yeast products, sourdough bread
- Nuts or nut butters
- Broad beans, lima beans, fava beans, snow peas
- Onions
- Figs, raisins, papayas, avocados, red plums
- Citrus foods
- Bananas
- Caffeinated beverages (tea, coffee, cola)
- Alcoholic beverages
- Aspartame, phenylalanine-containing foods, beverages

considerably. A thoughtful, interactive discussion with the patient about individual issues and concerns is the key to individualizing therapy and managing headache successfully.

Management of chronic headache cannot be accomplished in one brief visit. Monitoring, reevaluations, and therapeutic adjustments are warranted as necessary to accommodate individual circumstances and ensure that treatments remain safe, effective, and desirable.

Nonpharmacologic approaches

Various nonpharmacologic approaches deserve consideration in chronic headache. Thoughtful consideration should be given to approaches that provide each patient with the most appropriate coping strategies.

Education is of paramount importance for all patients with chronic illness, and especially chronic headache, because of the many treatment decisions that headache patients must make on their own. For example, patients need to know when, where, and with what agent or agents or activity or activities they can attempt headache intervention, and with what possible consequences to themselves and others.

Some migraine patients may also benefit from identifying any factors that may precipitate or exacerbate headache symptoms (TABLE 5). With this knowledge, patients and those around them—family members, friends, employers—can take steps to reduce or eliminate triggers that can be modified and to use prearranged coping strategies to deal with those that cannot.

Counseling and psychotherapy. Depression and anxiety often coexist with chronic headache. If headache patients have major depression or other psychiatric conditions, psychotherapy may be used as an adjunct to pharmacologic therapy.

Biofeedback and relaxation training, whether used independently or in conjunc-

Most biofeedback patients report continued improvement 5 or more years afterward

TABLE 6

GUIDELINES FOR LIMITING USE OF HEADACHE ABORTIVES

Medication	Maximum recommended use
Caffeine	2 treatment days/week (Dosage may be as important as frequency of use in producing withdrawal effects)
Codeine	2 treatment days/week*
Oxycodone	2 treatment days/week*
Butalbital	2 treatment days/week
Propoxyphene	2 treatment days/week
Butorphanol	2 treatment days/week
Ergotamine tartrate	8 treatment days/month (Maintain 4-day hiatus between treatment days)
Sumatriptan	6 treatment days/month or 2 treatment days/week

*In general, the use of opiates and opioids for symptomatic management of pain should be limited to occurrences in which acute abortive therapy has failed or is contraindicated. Opioids, as a class, should be limited to no more than 2 days/week regardless of which agent is used. However, if they are to be used, they should be administered in sufficient quantity to provide adequate analgesia.

Daily or near-daily use of abortive medications is not recommended for long-term management

tion with other approaches, have been shown to be excellent treatments in the long-term management of migraine and tension-type headache disorders. Studies indicate that techniques of physiologic self-regulation can decrease the frequency of attacks, severity of attacks, number of associated symptoms (including neck, back, and shoulder pain, dizziness, and fatigue), and need for symptomatic and preventive medications. Most patients who successfully complete biofeedback programs continue to report improvement 5 or more years afterward.

Neural blockade may be useful for patients for whom more conservative measures fail or who have occipital or supraorbital neuralgias. Patients suffering from cluster headache, cervicogenic headache, refractory tension-type headache, trigeminal neuralgia, and glossopharyngeal neuralgia have benefitted.

Acupuncture, a 5000-year-old medical practice, has become increasingly popular in the United States in recent years. Not only is its safety record excellent, but a recent large-scale study indicated that it offers short-term relief in 50% to 80% of patients with acute or chronic pain. Although results specific to headache are not as clearly documented, trials may be warranted, particularly in patients in whom drug therapy is inappropriate or poorly tolerated.

Other treatments. Chiropractic, physical therapy, ultrasound therapy, heat or cold, electrical nerve stimulation, therapeutic massage, and movement re-education techniques (eg, the Alexander technique and Feldenkrais method) have not been well studied or documented in managing chronic headache.

Pharmacologic approaches

Drug therapies require careful monitoring and periodic reevaluation to ensure patient safety. The patient's well-being is best safeguarded by exposing him or her to the least number of drugs and the smallest dosage that will facilitate improvement.

Abortive therapies. Patients should not use drugs (over-the-counter or prescription) to stop ("abort") headaches every day or nearly every day for long periods, for the following reasons:

- Long-term use of acetaminophen or nonsteroidal anti-inflammatory drugs (NSAIDs) can cause liver and kidney disease.
- Long-term use of combination analgesic products can cause analgesic nephropathy.
- Long-term use of caffeine, opiates (eg, propoxyphene, butorphenol, codeine, meperidine), butalbital, and ergotamine tartrate can lead to habituation or overuse.

TABLE 7

SELECTED ABORTIVE THERAPIES FOR MIGRAINE

Medication	Dosage*	Comments
Nonsteroidal anti-inflammatory drugs		Side effects may include dyspepsia, heartburn, upper gastrointestinal bleeding, diarrhea, constipation, nausea, vomiting
Ibuprofen	1200 mg, then 600 mg every 4 hours for two doses	
Diclofenac	50–100 mg	
Ketorolac	60 mg intramuscularly	
Flurbiprofen	100 mg, repeat once after 1 hour	
Meclofenate	200 mg, repeat once after 1 hour	
Glucocorticoids		Use only once per month; observe usual precautions for glucocorticoids
Dexamethasone injection	16 mg intramuscularly	
Dexamethasone	1.5 mg twice a day for 2 days	
Prednisone	20 mg four times a day for 2 days	
Methylprednisolone	4 mg; 21 tablets over 6 days (dose pack)	
Acute abortives		
Sumatriptan injection†	6 mg subcutaneously; may repeat once after 1 hour, up to 12 mg/24 hours	Do not use concomitantly with ergot alkaloids
Sumatriptan tablets†	25–100 mg	
Dihydroergotamine	0.5–1.5 mg intravenously, intramuscularly, or subcutaneously	Often given with metoclopramide or other antiemetic when used parenterally Usually given intramuscularly or intravenously in the hospital or office, subcutaneously at home
Ergotamine tartrate†	2 mg sublingually at earliest sign of headache; may repeat every 30 minutes up to three tablets per day or five tablets per week	
Caffergot tablets† Ergotamine tartrate 1 mg, and caffeine 100 mg	Two tablets at earliest sign of headache; may repeat one tablet every 30 minutes up to 6 tabs per day or 10 tablets per week	Maintain strict hiatus of 4 days between treatment days to prevent rebound headache
Caffergot suppositories Ergotamine tartrate 2 mg, and caffeine 100 mg	One fourth to one suppository; may repeat at 60 minutes up to two doses a day or five per week	
Midrin capsules† Isometheptene mucate 65 mg, dichloralphenazone 100 mg, and acetaminophen 325 mg	Two capsules, then one every hour to maximum of five per 24 hours; or two capsules, then two after 1 hour, then stop	

*All doses given by mouth, unless otherwise stated
†Contraindicated in uncontrolled hypertension, history of myocardial infarction, ischemic or structural heart disease, cerebrovascular disease, or peripheral vascular disease

Complete dosing instructions are found in the NHF *Standards of Care*

A prophylactic drug trial of 4 to 6 weeks is reasonable

TABLE 8

SELECTED PROPHYLACTIC THERAPIES FOR MIGRAINE

Medication	Dosage	Comments
Nonsteroidal anti-inflammatory drugs		Common side effects include dyspepsia, heartburn, upper gastrointestinal bleeding, diarrhea, constipation, nausea, vomiting
Fenoprofen	600 mg three times a day	
Flurbiprofen	100 mg twice a day	
Ketoprofen	75 mg three times a day	
Naproxen	250–500 mg twice a day	
Nabumetone	1000 mg daily	
Antidepressants		Most antidepressants have not been studied in controlled clinical trials for headache Side effects and cost should be major considerations when selecting within this group
Tricyclics, nonsedating		Side effects may include constipation, dry mouth, weight gain, blurred vision, sedation, tachycardia, orthostatic hypotension, and urinary retention
Protriptyline	5–30 mg/day	
Desipramine	25–150 mg/day	
Tricyclics, sedating*		Avoid in patients with narrow-angle glaucoma, prostatic hyperplasia, or cardiac conduction disturbances
Amitriptyline	10–150 mg/day	
Doxepin	10–150 mg/day	
Nortriptyline	10–150 mg/day	
Imipramine	10–150 mg/day	
Serotonin reuptake inhibitors*		Side effects may include nausea, diarrhea, insomnia, agitation, sexual dysfunction
Fluoxetine	10–80 mg/day	Discontinue fluoxetine at least 5 weeks before starting a monoamine oxidase inhibitor Fluoxetine has not been shown effective in migraine prophylaxis in a published clinical study
Sertraline	50–200 mg/day	
Paroxetine	20–60 mg/day	
Fluvoxamine	50–300 mg/day	
Monoamine oxidase inhibitors		
Phenelzine	15–60 mg/day	Significant food and drug interactions severely restrict use of this drug Ingestion of large amounts of tyramine may result in hypertensive crisis, myocardial infarction, or cerebrovascular accident Requires intensive patient education and cooperation Allow 14 days between monoamine oxidase inhibitor and use of tricyclics or other antidepressants Fluoxetine must be stopped at least 5 weeks before starting monoamine oxidase inhibitor

continued on next page

TABLE 8 (CONTINUED)

Medication	Dosage	Comments
Other antidepressants		
Trazodone	50–300 mg/day	Use in males may result in priapism
Bupropion*	200–300 mg/day	Side effects may include central nervous system agitation and seizures
Nefazodone*	200–600 mg/day	Side effects may include nausea, constipation, dizziness, dry mouth, fatigue, insomnia, asthenia, and agitation
Venlafaxine	75–225 mg/day	Side effects may include nausea, constipation, dizziness, dry mouth, fatigue insomnia, asthenia, agitation, and sweating.
Beta blockers		Side effects may include fatigue, gastrointestinal upset, sleep disturbances, hypotension, cold extremities, bradycardia, and sexual dysfunction Avoid use in patients with asthma, chronic obstructive pulmonary disease, congestive heart failure, atrioventricular heart block, bradycardia, insulin-dependent diabetes mellitus, and peripheral vascular disease
Propranolol	60–160 mg/day	
Timolol	10–20 mg/day	
Nadolol	20–120 mg/day	
Metoprolol	100–200 mg/day	
Atenolol	25–100 mg/day	
Calcium channel blockers		
Verapamil	120–480 mg/day	May cause hypotension, constipation, nausea, flushing, light-headedness, edema
Diltiazem	90–360 mg/day	
Nicardipine	20–30 mg two or three times a day	
Other drugs		
Methylergonovine	0.2 mg two to four times a day	Maximum use of 4–6 months with 1-month drug holiday may be appropriate
Bellergal-S Phenobarbital 40 mg, ergotamine tartrate 0.6 mg, and bellafoline 0.2 mg	One tablet twice a day	May cause rash, dry mouth, fatigue
Methysergide	2 mg two to four times a day	One-month drug holiday should follow 6 months of consecutive use due to possible fibrotic complications Peripheral ischemia, hallucinations, and peptic ulcer disease may occur
Cyproheptadine	4–8 mg in the evening; may increase to 4–8 mg four times a day	Commonly used in children Commonly causes weight gain and sedation Other anticholinergic effects may also occur
Divalproex sodium	250–2000 mg/day	Side effects may include hepatic dysfunction (especially in children), gastrointestinal upset, tremor, sedation, nausea, weight gain, alopecia, pancreatitis and bone marrow suppression Polypharmacy (especially barbiturates and anticonvulsants) increases incidence of hepatic complications Avoid in patients with hepatic disease Liver function tests should be performed before starting therapy

*Allow 14 days after discontinuing monoamine oxidase inhibitors to begin use

Prophylactic therapy can reduce the number of migraine attacks by 50%

- Long-term use of caffeine, opiates, butalbital, and ergotamine tartrate can lead to a pharmacologically maintained pattern of pain ("rebound" headache).

It is therefore prudent to set reasonable limits for use of abortives, recognizing that comorbid conditions or other individual circumstances may warrant exceptions. Guidelines for the restricted use of abortives are found in TABLE 6. If patients regularly use abortive therapies more frequently than these guidelines suggest, reevaluation for use of preventive therapy may be indicated.

TABLE 7 delineates current recommendations for use of selected abortive therapies for migraine. Abortive therapies for tension headache include NSAIDs and muscle relaxants; abortive therapies for cluster headache include oxygen inhalation, dihydroergotamine and sumatriptan injections, and lidocaine applied intransally. Complete dosing instructions are found in the NHF guidelines.

Prophylactic therapies can be instrumental in restoring function in patients with chronic headache. With effective prophylactic therapy, for example, approximately two thirds of migraine patients can expect a 50% reduction in the number of attacks they experience.

However, patients and others must understand that although prophylactic drugs can minimize the frequency of headaches they cannot necessarily eliminate them altogether. If patients know that breakthrough headaches can occur but can be treated, they are more likely to focus on an overall pattern of improvement than on intermittent or isolated events.

Eliminating drugs that cause analgesic rebound headache may reduce the need for prophylactic medication in some patients. (An important exception is daily use of NSAID therapy for prophylactic purposes.)

A trial course of a prophylactic drug should be long enough (if sufficiently tolerated) to ensure that therapeutic levels have been achieved, yet short enough to avoid prolonged courses of nonproductive therapies. A trial course of approximately 4 to 6 weeks is reasonable, but the duration may vary according to the medicine chosen and the patient's response. Beyond this period, if patients do not report improvement, evaluation for a different prophylactic choice may be warranted.

TABLE 8 lists recommendations for use of selected prophylactic medications for migraine; prophylactic options for tension headache are similar but do not include calcium channel blockers or beta blockers. Prophylactic therapies for cluster headache include verapamil, prednisone, ergotamine tartrate, methylsergide, lithium carbonate, divalproex sodium, and histamine acid phosphate. Complete dosing information can be found in the NHF guidelines.

WHEN TO REFER TO A HEADACHE SPECIALIST?

Patients for whom abortive therapies have failed or are contraindicated can undergo several trials of different prophylactic agents, as long as the physician is sufficiently comfortable and familiar with both the diagnosis and the therapies tried. However, referral to a headache specialist may be indicated as the next step in long-term management if:

- Symptoms remain unchanged despite efforts of practitioners.
- The initial diagnosis is in question.
- Disability continues or worsens.
- Symptoms change, no longer fitting diagnostic criteria.
- Comorbid conditions exist or develop, requiring polypharmacy.
- Habituation or rebound headaches limit outpatient management.
- Other circumstances limit outpatient management.

The latter two situations may warrant hospitalization; others include:

- Severe dehydration for which inpatient parenteral therapy may be necessary.
- Failed outpatient detoxification, for which inpatient pain and psychiatric management may be necessary.

- Intractable cluster headache, for which inpatient administration of histamine or dihydroergotamine may be necessary.

Referral as part of total management

In general, a referral involves more than a single consultation. Owing to the long-term nature of primary headache disorders and the problems that arise in treatment, referral should be regarded as an effort to intensify levels of care for patients who require specialized management. Patients and primary care physicians can expect that reevaluation, additional testing, further treatment, and monitoring may be necessary. The frequency of referral visits will thus be determined by individual needs.

During periods of improvement or stabilization, the primary care practitioner can coordinate or resume the follow-up visits, thus providing long-term continuity of care. The headache specialist and the primary care provider should develop a partnership in the long-term management of the patient with chronic headache. ■

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