Treatment of acute migraine attacks

JAMES R. WEINTRAUB, DO

Migraine headaches are a common medical problem that physicians frequently encounter in their practice. They can be disabling, leading to the individual's suffering if not treated appropriately and quickly. There is a variety of medications and treatment approaches that can be used to relieve pain and any associated symptoms. New medications have become available in recent years to aggressively treat migraine headaches. Called "triptans," these medications have been designed to specifically treat an acute migraine attack and can be effective if used early and properly. Many medications are also available to treat symptoms associated with migraines. Patient education, along with nonpharmacologic approaches, is an element of effective treatment. Biofeedback, relaxation, and physical techniques can be effective adjunctive options. Although nonprescription medications can be helpful initially, more specific treatment is often required. Opioids, phenothiazines, ergotamine, and the triptans are generally used in patients with difficult migraines. The newer agents, the triptans, offer new hope in aggressively treating this painful condition that often has an impact on individuals and their families.

(Key words: migraine headaches, cephalgia, medications, treatment)

Migraine headaches are a common medical problem and a leading cause of personal and family suffering, along with lost productivity and often inappropriate utilization of healthcare resources. In addition to the impact on migraneurs' social and family life, many men and women have lost work days each year because of migraine-related suffering. The prevalence of migraine headaches is approximately 6% among men and 15% to 18% among women.[1] More than 20% of persons with migraines suffer for more than 5 years before seeking medical attention, which is often incomplete and inadequate.[2] Population-based studies show that greater than 60% of migraineurs self-medicate with over-the-counter (OTC) medications, often leading to a worsening headache course.[3] In several headache surveys, approximately 25% of individuals responded that they were not satisfied with the care they had received for their chronic headaches.[4]

Physicians treating migraine face important decisions on how to optimize treatment for individual patients. Patients with headaches would receive faster resolution of their pain and return to their daily activities if physicians were more able to identify successful modes of therapy early. Many people are able to control mild to moderate pain with OTC medications and do not require prescription medications. At the other end of the spectrum, however, are people with frequent, severe, disabling migraine attacks whose lives are completely disrupted. Certainly, the effectiveness of treatment of the individual migraineur differs, depending on severity and disability. A wide variety and expanding range of therapeutic options for migraine exist in the year 2000. Further complicating the picture with regard to treatment is the lack of systematic strategies for identifying patients for whom a particular treatment or care would be most helpful.

The treatment of migraine headaches has changed dramatically during the past 10 years. With the advent of the "triptans" have come major changes in how acute migraine headaches are treated. In addition to new medications, new routes of administration and new strategies are available. With an improved understanding of the pathophysiology of migraine headaches and the expanding pharmacologic armamentarium has come the need to better understand effective strategies for the treatment of acute migraine attacks.

Overview of treatment

Treatment of migraine may include both pharmacologic and nonpharmacologic approaches and should be individualized to the patient. Nonpharmacologic therapy generally begins with patient education, including identifying and avoiding headache triggers. A broad range of abortive treatment modalities is available for migraine, with the choice depending on a number of factors. These factors include the severity of the headache, the time to reach peak intensity, the pattern of symptoms, the presence of comorbid illnesses, and the profile of the patient's response to treatment. Treatment options include both specific and nonspecific modes of therapy, with specific treatment modalities including pharmacologic agents that interfere or block the migraine process. Nonspecific treatment modalities that may address the symptoms of migraine include both pharmacologic (nonprescription and prescription) and nonpharmacologic options. Pharmacologic therapy of acute migraine attacks, also referred to as "abortive therapy," can be further categorized as nonspecific and specific migraine treatment. Nonspecific therapy relies on several classes of analgesics, including opioids, narcotic analgesics, and a variety of other drugs, including dihydroergotamine (DHE) and the newer triptan drugs. Symptomatic medications directed toward treating associated symptoms are an integral part of abortive therapy for migraines.

Dr Weintraub is attending neurologist, Michigan Head-Pain & Neurological Institute, Ann Arbor, Mich.

Correspondence to James R. Weintraub, DO, Michigan Head-Pain & Neurological Institute, 3120 Professional Dr, Ann Arbor, MI 48104-5199.

E-mail: *mhniinfo@aol.com*

The goal of symptomatic treatment is to reduce or end the pain and symptoms of migraine as they are occurring. If the intensity of migraine affects normal functioning and nonpharmacologic intervention is ineffective, drug therapy is necessary. Even if patients have good effective headache control on preventive therapy, symptomatic treatment is often needed to treat breakthrough attacks. Patient compliance with drug therapy often correlates with the severity of symptoms, as well as individual personal preference. A treatment plan for abortive therapy should seek to combine optimal benefit with minimal risk.

Many migraineurs have nausea, vomiting, and other symptoms during their attacks, which are an important consideration when prescribing abortive medications. Similarly, the patient's preference as to administration route and the potential for overuse of medications are extremely important when choosing treatment modalities. It is important to educate the patient regarding analgesic rebound before certain types of medication are prescribed. Virtually any agent taken for symptomatic treatment of an acute migraine attack could lead to rebound headaches if overused. Silberstein[5] has reported that more than 75% of his patients with chronic daily headache actually had transformed migraine resulting from overuse of medication.

In addition to various treatment options, various routes of administration are available. The speed of onset of drug effect and patient preference often play vital roles in treating acute migraines. Finally, certain conditions such as stroke, epilepsy, and psychologic disorders may play a role in treatment options. Therapy for migraine is more likely to be effective if treatment modalaities are tailored to the patient's individual needs, including preference, treatment options, and comorbid conditions.

Principles of migraine management

Because migraine is a heterogeneous disorder, treatment must be individualized. A diagnosis alone may not provide sufficient information to develop an effective plan for abortive treatment. Patients whose migraines are mild and occur occasionally would require a plan different from that of a patient whose migraine headaches are frequent and disabling. Impairment of function is a critical issue in developing a treatment plan. Treatment should therefore both relieve symptoms and rapidly restore the ability to function normally.

Patient education is an important element of effective treatment. Patients need to be educated on risk factors for migraine attacks and to be able to avoid triggers that may bring on an acute attack. They need to initiate lifestyle changes, keep headache diaries, restrict diets, and institute behavioral interventions, all with the idea of establishing control and limiting the need for abortive medications. Ultimately, it is the patient who must decide whether to comply with the physician's directions on how to take abortive treatment for migraines.

The severity and the impact of migraine on daily life are key factors in guiding the initial choice between nonspecific and specific modes of therapy and whether to follow a stepped-care or stratified-care approach to treatment. With stepped care, therapy is usually begun with an appropriate trial of simple analgesics, and, if unsuccessful, it can be escalated using stronger analgesics such as prescription nonsteroidal anti-inflammatory drugs (NSAIDs) or combination products such as an isometheptene mucate–acetaminophen-dichloralphenazone combination (Midrin), until the patient obtains adequate relief from symptoms. The patient can begin at a level of treatment that takes into account the previous history of response to particular treatment modalities, so for example, previous history of response to simple analgesics might suggest the use of the isometheptene mucate–acetaminophen-dichloralphenazone combination early.

Stepped care, however, may be inefficient in treating patients who suffer from severe, incapacitating headaches that are refractory to simple or combination analgesics. In the previous example, the application of stepped care may lead to treatment failure and frustration with the program. The patient may become discouraged and shy away from effective medical therapy by this approach.

A stratified approach may be more appropriate, which view is based on the assumption that patients with differing treatment needs can be identified at the initial evaluation and patients with more severe, disabling episodes would receive specific medications that are more likely to help. The patient and the physician should have the necessary flexibility to use medications according to the patient's need at any particular time.

Regardless of the medication prescribed or recommended for an acute migraine attack, the patient should be instructed to take the dose of medication as soon as possible after symptoms of migraine begin. The route of administration is an important component of migraine therapy. Oral therapy is usually the first choice for most patients and can be effective, even if nausea and vomiting are associated with the migraine attack, provided the oral route is initiated early in the attack. Patients with severe nausea and vomiting will require nonoral modes of treatment, usually in the form of suppositories or nasal sprays. Patients with severe headaches requiring rapid onset of action will usually benefit from nonoral routes of administration.

Nonpharmacologic modes of therapy

Despite the increasing availability of effective pharmacologic treatment modalities for migraines, nonpharmacologic modes of therapy (*Figure 1*) continue to play an

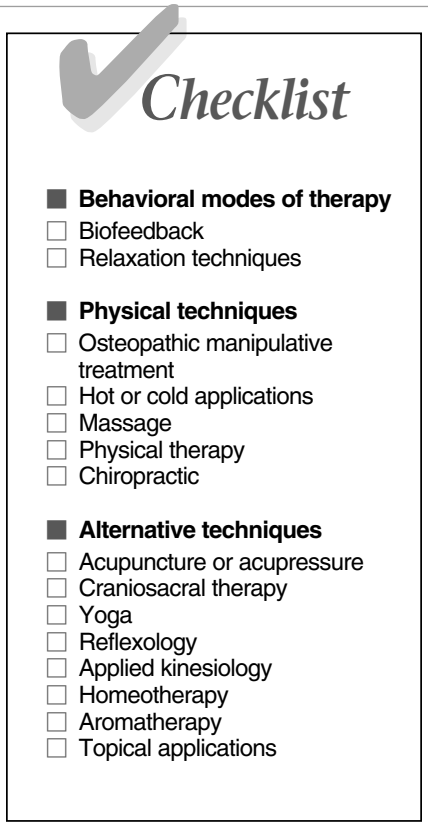

Figure 1. *Nonpharmacologic options for treatment of migraine.*

Checklist

■ Nonprescription analgesics

- ☐ Aspirin
- ☐ Acetaminophen
- ☐ Nonsteroidal anti-inflammatory drugs (NSAIDs)
  - — ibuprofen
  - — naproxen sodium (Aleve)
- ☐ Caffeine-containing analgesics
  - — Anacin
  - — Excedrin Migraine

■ Prescription medications

- ☐ Isometheptene mucate–acetaminophen-dichloralphenazone combination (Midrin)
- ☐ NSAIDs, including, but not limited to:
  - — naproxen sodium (Anaprox, Naprosyn)
  - — meclofenamate (Meclomen)
  - — flurbiprofen (Ansaid)
  - — ketorolac (Toradol) in parenteral form
- ☐ Caffeine-containing analgesics
  - — butalbital-aspirin-caffeine combination (Fiorinal)
  - — butalbital-acetaminophen-caffeine combination (Fioricet)
- ☐ Muscle relaxants and anti-spasticity medications
  - — cyclobenzaprine hydrochloride (Flexeril)
  - — methocarbamol (Robaxin)
  - — tizanidine hydrochloride (Zanaflex)

■ Prescription medications (continued)

- ☐ Corticosteroids
- ☐ Opioids
  - — codeine
  - — butorphanol nasal spray (Stadol)
- ☐ Dopamine antagonists
  - — metoclopramide hydrochloride (Reglan)
  - — intravenous droperidol
  - — intravenous chlorpromazine hydrochloride (Thorazine)
  - — prochlorperazine (Compazine)
- ☐ Ergotamine derivatives
  - — ergotamine tartrate with caffeine (Wigraine)
  - — sublingual ergotamine tartrate without caffeine (Ergostat)
  - — ergotamine tartrate suppository with caffeine (Cafergot)
  - — dihydroergotamine mesylate: intravenous, intramuscular, and subcutaneous forms (D.H.E. 45); nasal spray (Migranal)
- ☐ Selective serotonin-receptor agonists (triptans)
  - — naratriptan hydrochloride (Amerge)
  - — sumatriptan succinate (Imitrex); injectable formulation, nasal spray
  - — zolmitriptan (Zomig)
  - — rizatriptan benzoate (Maxalt); tablet and rapidly dissolving wafer
  - — eletriptan (Relpax)

Figure 2. *Pharmacologic options for treatment of migraine. For full prescribing information, refer to package insert or* Physicians' Desk Reference.

important role in management. Most headache specialists have concluded that a combination of pharmacologic and nonpharmacologic modes of therapy is more effective than either type alone.

Behavioral modes of therapy, including biofeedback and relaxation techniques, can be beneficial for some patients with migraine. Through biofeedback, patients learn how to alter muscle tension or blood flow to help stop a headache. Biofeedback therapy can be used in migraine to avoid or decrease the dose of medication taken for milder headaches and to help manage moderate to severe attacks.[6] Deep relaxation is particularly useful during an acute migraine attack.

A variety of physical techniques are used for management of headaches. They include osteopathic manipulative treatment early in migraine attacks, hot or cold applications, massage, physical therapy, and chiropractic. Some alternative techniques that have also been used in headache include acupuncture or acupressure, craniosacral therapy, yoga, reflexology, applied kinesiology, homeotherapy, aromatherapy, and topical applications. In the past and even currently, treatment options for patients with migraine have used several of the aforedescribed nonspecific modes of therapy. A combination of these older, but nevertheless effective, modes of therapy and new medications has revolutionized migraine treatment. Stratified care should include nonpharmacologic and other nonspecific treatment modalities for milder headaches, with a stronger pharmacotherapy program being used when appropriate.

Pharmacologic treatment

Nonprescription medications

The symptomatic treatment of migraine may begin with the use of simple nonprescription analgesics, and a wide variety is available (*Figure 2*). Simple analgesics include aspirin, acetaminophen, and NSAIDs, such as ibuprofen. If taken early and in adequate doses, they may stop the progression of an acute migraine attack. Aspirin has been available in tablet form for approximately 100 years, and a dose of 325 mg to 1000 mg may be helpful when taken early.[7] Overuse can lead to analgesic rebound headaches and gastrointestinal (GI) problems.

Acetaminophen used in doses of 325 mg to 1000 mg, both alone or in combination with other medications, may be helpful for the occasional migraine.[8] Long-term side effects can include liver toxicity, renal problems, and analgesic rebound. Caffeine may be added to many nonprescription products to enhance the analgesic effect and improve GI absorption, as it is a vasoconstrictor and central nervous system stimulant, helping to relieve head pain.[9] An adequate dose taken as soon as possible after the onset of symptoms may be helpful, with a maximum dose of acetaminophen being 4000 mg/d. Rebound headaches may develop if these analgesics are used more than 3 days per week. When combined with simple analgesics (Anacin or Excedrin), caffeine can be a useful adjuvant for treating migraine headaches. A combination of acetaminophen, aspirin, and caffeine (Excedrin Migraine) has recently been approved by the US Food and Drug Administration for the treatment of migraine headaches, with its recommended dose being 2 tablets every 6 hours, with the maximum use being 8 tablets in 24 hours. When compared with placebo, this combination therapy reduced migraine intensity in 60% of patients and can be effective if taken early in mild to moderate migraine.[9]

Many patients treat themselves with caffeine-containing products, and many

patients will overuse caffeine, leading to rebound headaches. A dose as small as 250 mg can cause caffeine withdrawal headaches, and overuse can lead to insomnia, irritability, and tachycardia. A variety of sinus medications contains simple analgesics, which may initially be helpful for migraine headaches; however, if they contain a decongestant, the long-term use can lead to rebound headaches.[9]

NSAIDs have been found to diminish the severity of migraine attacks and duration, although one has not been found to be more effective than another. Marked patient-to-patient variability exists in response to individual agents; therefore, the choice is individualized. Naproxen sodium has been the initial choice for migraine because of its efficacy, tolerance, and safety records, and in the majority of cases, it is given orally.

Prescription medications

Isometheptene mucate is a vasoactive amine that can be helpful for relief of mild to moderate migraine, although it is not as potent as ergotamine tartrate or the serotonin-receptor agonists. The initial dose is 1 to 2 capsules, which can be repeated up to a maximum of 5/d, 2 days per week. The brand name is more effective than the generic compound and can be an effective abortive agent. NSAIDs in prescription form are often the first choice for mild to moderate migraine headaches and are effective when given early in sufficient dosages. More than 20 different NSAIDs are available. No studies have compared relative efficacy; however, the lack of response to one agent does not necessarily mean that others will not be helpful, and naproxen sodium (Anaprox, Naprosyn) is often the first choice.[10] Other oral NSAIDs include meclofenamate (Meclomen), flurbiprofen (Ansaid), and ketorolac (Toradol) in parenteral form.[11]

When the aforementioned analgesics are ineffective, usually a combination of aspirin or acetaminophen with butalbital may be effective. Butalbital-containing medications can be effective early in a migraine course and are often used with caffeine. Fiorinal, the first butalbital-containing medication, can be used up to 4 tablets per day, with limits not to use it more than 2 days per week to avoid analgesic rebound. Fiorinal is a commonly prescribed medication to treat migraine headaches but is frequently overused, requiring detoxification to eliminate analgesic rebound. Side effects include drowsiness and confusion, and it should be avoided in depressed patients.

Although muscle relaxants and antispasticity medications are not commonly used for the treatment of acute migraine, they can sometimes be helpful. Frequently used products—clonazepam (Klonopin), cyclobenzaprine hydrochloride (Flexeril), methocarbamol (Robaxin), and tizanidine hydrochloride (Zanaflex)—can all be helpful in aborting a migraine headache.

Corticosteroids are used infrequently to treat migraine headaches because of the possibility of long-term side effects, including septic necrosis. On occasion, they can be effective in treating severe prolonged migraine attacks. Short-term side effects can include insomnia and increase in blood pressure. Use of these medications should be reserved for refractory migraine headaches.

Opioids can be used for an acute migraine attack, but on a limited basis when other medications have not provided relief. They can be given alone or in combination with other analgesics, but their use should be extremely limited. Opioids carry the threat of physical dependence, tolerance, and addiction, and their use should be limited to patients with severe, infrequent migraines that have been unresponsive to other more accepted agents.[12] Codeine is the opioid most commonly used, but intranasal butorphanol (Stadol) is a mixed agonist-antagonist that is often prescribed. Butorphanol nasal spray may provide relief of migraine pain within 15 to 30 minutes of administration, with the most frequently reported side effects being sleepiness and dizziness. The preparation is dosed as one spray (1 mg) in one nostril, repeated in 90 minutes and again in 4 hours only if necessary. The maximum dose should be three sprays in 24 hours, and it should not be used more than 2 days per week.[13] Opioids may be an alternative for patients with menstrual migraine if they do not respond to standard abortive agents[14]; however, their use should be limited to reliable patients with severe migraines that are unresponsive to other analgesics, ergotamine preparations, and serotonin agonists.

The dopamine antagonists have been used for a long time in treatment of acute migraine. Metoclopramide hydrochloride (Reglan), 10 mg, not only helps to relieve nausea but also can reduce the pain. Although the oral formulation may be effective, the intravenous (IV) formulation relieves migraines more rapidly and completely. Other agents in this family that are helpful include IV droperidol and IV chlorpromazine hydrochloride (Thorazine) or prochlorperazine (Compazine).[15] Because of the potential for hypotension and drowsiness, these agents should be administered in a hospital or emergency department setting with IV hydration.

Specific migraine agents: ergotamine and dihydroergotamine

Ergotamine derivatives used to be the drugs of first choice for moderate to severe migraine headaches when simple analgesics did not work. They have been used frequently through the years if other medications produced significant side effects, and ergotamine has been used for more than 50 years as a treatment for migraine. Both ergotamine and DHE interact with serotonin 5-HT_1 receptors as well as adrenergic and dopaminergic receptors and are weaker vasoconstrictors than the triptans.[16] Although ergotamine can produce rebound headache, DHE has not been found to do so. Routine use of ergotamine has been limited because of some side effects, including nausea and vomiting, abdominal cramping, muscle cramps, and vasoconstriction.

Ergotamine tartrate is available in tablet form as a 1-mg dose combined with caffeine (Wigraine), with the usual starting dose being 2 mg, which can be repeated 30 to 60 minutes later if necessary. A 2-mg dose is available in sublingual formulation without caffeine (Ergostat) and as a suppository with caffeine (Cafergot).[17] Lesser doses of the suppository should be used initially because of its greater bioavailability; and to limit rebound, the preparation should not be used more than one to two times per week. More frequent doses, however, have been used for the treatment of menstrual migraine and often are used with an antiemetic agent as pretreatment to decrease the likelihood of nausea and vomiting. Ergotamine preparations should not be given to patients with hypertension or coronary artery disease, and patient selection is important.

Another ergot, dihydroergotamine (DHE) mesylate, is effective in several forms in terminating a migraine, and its

long half-life (10 hours) contributes to a low recurrence rate. Intravenous DHE (D.H.E. 45) is commonly used in inpatient settings or in emergency departments to break a migraine cycle, with the usual dose being 1 mg.[18] The intramuscular and subcutaneous doses are also 1 mg two to three times a day; a nasal spray (Migranal) is given at a 1-mg dose in each nostril. Although DHE is similar to ergotamine, it does not possess the same peripheral vasoconstrictor effects and is considered a safer drug to use.[19] The effectiveness of intranasal DHE has demonstrated in clinical trials to afford significant improvement in pain control and nausea and other migrainous symptoms compared with placebo.[20] The recommended total dosage is 2 mg, divided into 0.5 mg in each nostril and repeated after 15 minutes.[21] It is also recommended that because of vasoconstrictive effects, DHE should not be used within 24 hours of administration of serotonin agonists.[22]

Selective serotonin-receptor agonists

It has been approximately 8 years since the arrival of selective serotonin-receptor agonists. Known as the triptans, this class of selective serotonin-receptor agonists was designed specifically as antimigraine medicines. They were designed to interact with the specific serotonin receptors in the brain that are involved in a migraine attack, and they can stop a migraine in its tracks and restore patients to normal function.

All the triptans available share a common mode of action in that they activate serotonin receptors on nerves and blood vessels that, in turn, reduce inflammation and swollen blood vessels that contribute to migraine pain.

Not all triptans are created equal, although similarities exist in that several of them are fast acting, while one specifically, naratriptan hydrochloride (Amerge), is slower to act, but its effects last longer.[23] Although naratriptan has fewer side effects, it constricts arteries the same as all the triptans. Different routes of administration are available for this class of medications, but it is not recommended that different triptans be used in the same day. Some of the triptans have a lower rate of recurrence of headache and longer duration of action, whereas others may be more effective.

Sumatriptan succinate (Imitrex) was the first drug designed in this class that revolutionized our understanding of migraine and made our ability to treat headaches more effective. It has been used by more than 10 million patients, and the most scientific information is available on this triptan.[24] It is available in multiple formulations, including a 6-mg injectable formulation, a 5-mg and 10-mg nasal spray, and 25-mg and 50-mg oral tablets.[25] Controlled studies demonstrated that a subcutaneous dose of sumatriptan was effective in decreasing the severity of headaches in approximately 60% to 80% of patients, irrespective of duration of migraine before therapy.[26] It also rapidly relieved the accompanying migraine symptoms and had a rapid onset of action. The maximum dose per day is two injections separated by at least 1 hour, but patients should wait until the migraine appears because it is not effective when used during the aura. The oral form is less effective and takes longer to take effect, and up to 100 mg/d can be used in most cases. The most effective starting dose is 50 mg orally. Availability of multiple formulations are advantageous because it allows for great variability in dosing and treating migraine attacks in different instances. Not all migraine attacks are the same; the physician can tailor the treatment to the presentation of the migraine.

In the injectable formulation, sumatriptan is the fastest and most effective but also has the highest rate of side effects, including tingling, tightness in the chest and jaw, heat sensations, dizziness, and nausea, all of which are usually self-limited and resolve without further treatment.[27]

The nasal spray is rapid in onset and effective in about 60% to 70% of patients within 2 hours, although unpleasant bitter taste is a common side effect.[28] Even though tablets may take longer to act, approximately three fourths of patients feel no or only mild pain several hours after its use.[29] Some cardiovascular deaths have been associated with sumatriptan; therefore, patients who have significant risk factors for cardiovascular disease need a thorough evaluation before using it. A small percentage of patients have had electrocardiographic changes, suggesting that sumatriptan can cause vasospasm and cardiac ischemia, and patients at risk for unrecognized coronary artery disease should undergo the first administration under a physician's supervision.

A major therapeutic consideration in the use of sumatriptan is recurrence of headache seen in approximately 35% to 40% of patients within 12 hours, meaning that approximately one third of users will have the headache return.[30] This recurrence may be related to the short half-life of sumatriptan, approximately 2 hours; retreatment is an option.

Zolmitriptan (Zomig) was the second triptan released, and the 2.5-mg tablet is the proper starting dose for most patients. It should be used at the start of a migraine attack and can be repeated in 2 hours.[31] Approximately 65% of patients were significantly better in clinical trials in 2 hours, as were the associated migrainous symptoms. Patients can notice a beneficial effect starting 30 minutes after taking zolmitriptan, although 30% of patients may have the headache return within 24 hours, requiring another dose.[32] The most common side effects are similar to those of the other triptans, and the contraindications are the same.

Naratriptan is a newer-generation triptan approved for the treatment of acute migraine, and, although it is in the same family as sumatriptan, differences exist. One important feature is that it is better tolerated, and, with a side effect profile that seems to be less than the other triptans, it can be considered a "kinder, gentler triptan." Naratriptan has a longer half-life than oral sumatriptan (6 hours compared with 2 hours), and it has a lower associated rate of recurrence of headache. It has a slower onset of action, reaching maximum effect in 4 hours, which in some cases may be a problem. It is available in a 2.5-mg dose, and controlled studies found it to be 60% to 70% effective within 4 hours of treatment.[33] Headaches recurred in 17% to 28% of patients, and because of its sustained action, naratriptan has proved to be useful for prolonged migraine attacks. It has been shown to be effective in menstrual migraine, and switching to naratriptan may reduce the need for frequent dosages in patients who have recurrent migraines. If a migraineur needs a rapid-onset-of-action triptan, naratriptan probably is not the best choice.

Rizatriptan benzoate (Maxalt) is the most recent of the triptans available and was approved by the US Food and Drug Administration (FDA) 2 years ago. In clinical trials, it provided approximately 70% relief 2 hours after a 10-mg dose and relieved the associated symptoms of

migraine during an attack, thereby improving the patient's ability to function. Its onset of action as early as 30 minutes after dosing was quick enough, with improvement of 80% after a second dose.[34] Rizatriptan is available as both a tablet and a rapidly dissolving wafer, with the wafer being more effective in patients with associated nausea because it dissolves on the tongue and requires no water. Unlike sumatriptan, rizatriptan can cross the blood-brain barrier, acting directly on the central nervous system (CNS), and it does not appear to have many of the CNS side effects, including dizziness, compared with the other triptans.[35] Patients using propranolol hydrochloride should use only the 5-mg dose of rizatriptan benzoate, because its effect is enhanced. Controlled studies demonstrated high consistency from attack to attack in patients treated with rizatriptan, with similar effects to the other triptans.[36] Rizatriptan-treated patients are less likely to have many of the typical side effects that other patients have with the other triptans.[37]

Eletriptan (Relpax) has received an approvable letter from the FDA, which will make it the fifth triptan available to physicians. In controlled studies, eletriptan was found to be markedly effective, with excellent efficacy and speed of onset. The 80-mg dose relieved up to 80% of attacks at the 2-hour mark, with close to 90% benefit at 4 hours. Headache recurred within 24 hours in about one third of the attacks, with similar side effects, with the lower doses (20 mg and 40 mg) being better tolerated. One of the benefits of eletriptan appears to be its elimination half-life of 5 hours, compared with 2 hours for sumatriptan.[38]

All the triptans have shown clinical efficacy in relieving the pain of migraine; however, the associated symptoms of migraine, including nausea, vomiting, photophobia, and phonophobia, can also impair quality of life and ability to work effectively. Treating these symptoms effectively is also an integral part of assessing which triptan can be most effective in a given patient. Analyzing closely the migraineur's headache pattern and associated symptoms is an important aspect in choosing which triptan will best fit the individual patient.

Comment

Only a decade ago, a patient with migraine could expect little more than transient or incomplete relief from the pain and associated symptoms. Although no cure is yet available, most migraineurs can achieve relief through a variety of treatment options, including behavioral therapy and pharmacotherapy. Avoidance of headache triggers and having an effective preventive therapy and pharmacotherapy for acute migraine in place can allow patients with migraine to live normal lives. Treatment of migraine has changed over the years, most dramatically with the introduction of the triptan class of abortive agents.

Tailoring an effective program to the individual patient is crucial in allowing patients a normal quality of life and avoidance of the disability and pain that this illness has brought in the past. Therapy for migraine is more likely to be effective if the clinician takes into account the patient's preference, treatment options, and comorbid conditions. Effective treatment of migraine requires patient education, the assessment of headache-related disability and its impact on the patient's life, and information on severity of migraine to guide treatment strategy. Abortive migraine treatment modalities include nonpharmacologic approaches and pharmacotherapy. Newer treatments are becoming available regularly, allowing physicians to more effectively treat patients with this painful condition.

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