Patient Treatment Preferences and the 5-HT\textsubscript{1B/1D} Agonists

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Migraineurs have specific preferences with regard to migraine therapy. In surveys, they consistently cite several attributes they seek in a migraine medication: rapid pain relief, complete pain relief, ability to return to normal functioning, relief of migraine-associated symptoms, reduction in headache recurrence, and minimal adverse effects. When prescribing medication for patients with migraine, physicians should respect patients' treatment preferences and select drugs that most closely meet patients' needs. As a class, the 5-HT\textsubscript{1B/1D} agonists, or triptans, have many of these attributes, including effectively relieving pain and associated symptoms and allowing patients to return fairly quickly to their normal activities. However, differences have emerged in the ability of specific triptans to satisfy patient preferences. Physicians should consider these differences when prescribing triptans for their patients with migraine.

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The pounding, throbbing, unilateral pain that is the hallmark of migraine is often so severe that patients cannot function normally, or at least find it difficult to do so. This pain, combined with the other common symptoms of migraine—nausea, vomiting, photophobia, and phonophobia—may incapacitate patients for hours, a day, or longer. In one study, 71% of patients reported they could not think or concentrate at all when symptoms were severe, and 83% could not perform daily activities such as shopping or housework during a severe migraine attack.\(^1\)

Logic dictates that patients with migraine, particularly those with severe or frequent migraine attacks, would seek medical help. However, for various reasons, between 40% and 66% of migraineurs do not seek help from a physician,\(^2\) and among those who do, many do not continue regular physician visits.\(^3\) This may be because of patients' perceived lack of empathy from the physician and a belief that physicians cannot effectively treat migraine. In a 1999 British survey, 17% of 9770 migraineurs had not consulted a physician because they believed their condition would not be taken seriously, and 8% had not seen a physician because they believed existing migraine medications were ineffective.\(^2\) By far, the most common reason (cited by 76% of patients) for not seeking a physician's advice was the patients' belief that they did not need a physician's opinion to treat their migraine attacks.\(^2\) Interestingly, the severity of the migraine attack did not correlate with a patient's tendency to seek medical help: patients with severe migraine pain were no more likely to consult a physician than were those with milder symptoms.\(^2\)

What does this mean for primary care physicians? Clearly, when patients do consult physicians for migraine, physicians must take the problem seriously. Migraine is not just a headache; it is a disabling, chronic condition that considerably affects patients' everyday lives. To help patients most effectively, physicians need to accurately diagnose the condition, excluding other types of severe headache and pathologic conditions such as tumor. Once the diagnosis is confirmed, physicians need to maintain open lines of communication with their patients and respect patient preferences for migraine treatment and prevention.

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IDENTIFYING PATIENT PREFERENCES

Pain is a subjective experience that can be assessed only by questioning patients about its type and severity. Likewise, questioning patients about a drug’s effects is the only way to determine response to a pain-relieving medication. Patients with migraine have several choices of pain-relieving medications, ranging from over-the-counter analgesics and older migraine medications (eg, ergotamine and dihydroergotamine) to the newer 5-HT1B/1D agonists, including sumatriptan, zolmitriptan, rizatRIPTAN, naratriptan, and almotriptan.

Determining how well these newer agents meet patients' needs requires an understanding of patients’ desires in a migraine medication. Headache specialists and researchers are recognizing the importance of respecting patient preferences for and satisfaction with migraine drugs. Consequently, formal measurement of patient priorities and satisfaction with medication are receiving greater emphasis as part of the overall assessment of a migraine drug.

To determine the treatment priorities of patients with migraine, investigators have relied on 2 methods: patient surveys and use of “patient satisfaction” as an end point in clinical trials of migraine drugs. In both of these methods, the treatment priorities identified by patients tend to be fairly consistent1,4,5 (Table 1). Not surprisingly, the most desired attribute by far for a migraine medication is rapid and complete pain relief.

In 1995, Silberstein4 published the results of a telephone survey of 500 self-reported migraineurs. Almost all the survey respondents were women (443 women and 57 men), which is consistent with the greater prevalence of migraine in women than men. Most of the respondents (60%) had 3 or fewer migraine attacks per month; 15% reported 4 attacks per month, and 25% had 5 or more attacks per month. When describing their most recent migraine attack, 93% of patients reported moderate or severe headache pain, 76% had moderate or severe nausea, and 92% had moderate or severe visual problems. When asked to rate the importance of specific attributes of a migraine medication on a 10-point scale (with 1 indicating not at all important and 10, extremely important), survey respondents gave the highest ratings to “provides quick headache relief” (mean rating, 9.91) and “decreases headache pain” (mean rating, 9.87). Other migraine medication features considered important by the participants in this survey were “decreases likelihood of recurrence,” “does not cause nausea,” “decreases nausea,” “decreases vomiting,” “decreases sensitivity to light,” “oral administration,” “decreases visual problems,” and “does not cause drownsness.”

In a 1999 telephone survey of 688 migraineurs by Lipton and Stewart,7 patients expressed a strong preference for a migraine medication that could provide complete pain relief. When asked to rate the importance of various drug attributes, complete pain relief was considered important or very important by 87% of the participants, followed by no recurrence (86%), rapid onset (83%), no adverse effects (79%), relief of migraine-associated symptoms (76%), and route of administration (56%).

With knowledge of patients’ preferences for migraine medication, the challenge for the physician is to select the drug that best meets patients’ expressed needs. Although many different drugs are available to treat migraine and its associated symptoms, this review focuses on the 5-HT1B/1D agonists, commonly called triptans. This new class of migraine medication can provide considerable relief for patients with moderate to severe migraine, while causing few adverse effects. However, for many patients with mild migraine, nontriptan medications, including over-the-counter analgesics and prescription-strength nonsteroidal anti-inflammatory drugs, provide adequate pain relief and may be preferred by these patients because of the drugs’ lower cost and ease of availability. Also, nonpharmacologic approaches to migraine treatment (eg, avoiding migraine triggers and biofeedback) remain important even with the advent of effective migraine-specific therapy and should be incorporated into the overall treatment plan.

HOW WELL DO THE TRiptANS MEET PATIENT NEEDS?

Because patients have specific needs with regard to acute migraine medications, they tend to be dissatisfied with medications that do not meet these needs. Lipton and Stewart7 found that the most common reason migraineurs were dissatisfied with their current medication was that pain relief took too long (Figure). Patients also were dissatisfied if pain was not completely relieved, the medication was not consistently effective, the headache recurred, or they experienced too many adverse effects.

Patients with moderate to severe migraine who have been treated with older acute migraine medications such as ergotamine and dihydroergotamine and who have obtained relief with these drugs without
undue adverse effects may prefer to continue using these drugs. However, for patients newly diagnosed with migraine and for those in whom older migraine medications are ineffective, the triptans offer a suitable alternative and are becoming the drugs of choice for moderate to severe migraine.

There is now a fair amount of data on the efficacy and safety of the triptans, along with some information on patient satisfaction with these drugs. A review of these data can help determine how well the profiles of the various triptans correspond with patient treatment preferences. As previously stated, one of the most important attributes patients seek in a migraine medication is complete relief of pain. Most triptan studies have used pain relief (ie, a reduction in pain from moderate/severe to mild/none) at 2 hours as the primary efficacy endpoint, although in several studies data on complete pain relief (ie, a reduction in pain from moderate/severe to none) are also presented. For some clinicians, the distinction between pain relief and complete pain relief (ie, pain free) may be unclear, and the International Headache Society Clinical Trials Committee now recommends that the primary efficacy endpoint in migraine drug trials be pain free at 2 hours.

**Sumatriptan**

Sumatriptan was the first 5-HT1D agonist approved for use in the United States. Introduced in 1993 as a subcutaneous formulation, sumatriptan is also available in oral and intranasal formulations.

Sumatriptan seems to meet several patient treatment priorities. When administered subcutaneously at the recommended dose of 6 mg, sumatriptan relieves pain within 30 minutes in 63% of patients and within 2 hours in 81% of patients. Between 54% and 61% of patients treated with 50 mg of oral sumatriptan experience pain relief within 2 hours, and in some patients response occurs within 30 minutes after dosing. Both the subcutaneous and oral formulations are significantly more effective than placebo in relieving migraine-associated symptoms (eg, nausea, vomiting, photophobia). With the oral 50-mg dose, between 54% and 84% of patients experience no or mild clinical disability within 4 hours after taking the drug; results for the percentage of patients with no or mild clinical disability at the more commonly measured 2-hour time point are not available.

Adverse effects are few with the 50-mg oral dose, most commonly atypical sensations (eg, paresthesia) and pain and other pressure sensations. For the 6-mg injectable dose, about 60% of patients in clinical trials experienced an injection site reaction, and 42% reported atypical sensations. Dizziness or vertigo was another common adverse effect of subcutaneous sumatriptan, occurring in 12% of patients. Accurate assessment of headache recurrence is difficult, but studies indicate that 21% to 57% of patients taking oral or subcutaneous sumatriptan experience recurrence 24 to 48 hours after initial dosing. In clinical practice, most physicians agree that the recurrence rate is about 30%. Most patients in whom headache recurs respond to a second dose of sumatriptan.

Most migraineurs prefer oral medication. However, when given a choice between traditional migraine therapy and subcutaneous sumatriptan, many patients prefer the injectable drug, primarily because it offers more rapid relief of pain. In a study published in 1995, not long after subcutaneous sumatriptan became available, patients with migraine expressed a strong preference for sumatriptan over their usual migraine therapy, which included meperidine hydrochloride, acetaminophen with or without codeine, butalbital with or without codeine, ergotamine, and aspirin. Nearly all the 648 patients in this study considered “how well it works” the most important attribute for an acute migraine medication, followed by safety and speed of onset of effect. Patients rated subcutaneous sumatriptan more highly than their customary migraine medications, indicating that sumatriptan better met their needs.

Similar findings were reported by Bouchard et al, who assessed patient satisfaction with subcutaneous sumatriptan as part of an open-label, prospective, multinational study. In this study, 433 patients who had treated at least one migraine attack with subcutaneous sumatriptan completed a patient satisfaction questionnaire. Each of these patients had used their customary prescription migraine medication to treat an unlimited number of attacks over a 12-week period. Patients were then enrolled in a 24-week treatment phase during which they could treat an unlimited number of migraine attacks with 6 mg of subcutaneous sumatriptan. To determine patients’ level of satisfaction with sumatriptan compared with their usual therapy, the investigators asked them to rate the medications’ performance in 5 areas: speed of onset of action, duration of effect, dependability, ease of use, and speed of return to normal activities. Except for ease of use, patients rated sumatriptan higher than their customary medication on each of these attributes.

Different formulations of sumatriptan seem to meet specific patient needs: convenience and ease of use for the oral drug, and rapid pain relief for the subcutaneous formulation. Nevertheless, some patients fear self-injecting a drug, and others experience a burning sensation at the injection site. Therefore, subcutaneous sumatriptan, despite its high ranking in patient surveys, may not be an ideal first choice for acute migraine therapy. However, for patients who need quick relief, such as those who awake with an incapacitating migraine, and for those whose nausea or vomiting prevents use of an oral drug, the subcutaneous route is preferred.

An alternative to the subcutaneous and oral formulations of sumatriptan is the intranasal spray. This formulation is useful for patients who want to avoid an injectable drug and for those who cannot take oral medication because of nausea or vomiting. Intranasal sumatriptan is rapidly absorbed after administration, and some patients report pain relief as soon as 15 minutes after taking the 20-mg dose. In controlled clinical trials, between 53% and 64% of patients treated with 20 mg of intranasal sumatriptan reported no or mild pain within 2 hours after administration. In a dose-ranging study, 42%
of patients taking 20 mg of intranasal sumatriptan were pain free within 2 hours. Intranasal sumatriptan is also effective in relieving functional disability: between 70% and 74% of patients taking 20 mg of intranasal sumatriptan reported no or mild clinical disability 2 hours after administration. One drawback to intranasal administration of sumatriptan is that about 25% of patients experience a bitter or bad taste after using this formulation.

### Zolmitriptan

Zolmitriptan is available in 2.5-mg and 5-mg conventional tablets and in an orally disintegrating formulation that patients can take without water (the wafer disintegrates on the tongue). The orally disintegrating formulation of zolmitriptan is available in a 2.5-mg dose only. Although both doses are effective, the optimal dose is 2.5 mg; the 5-mg dose offers little added benefit over the 2.5-mg dose and has an increased risk of adverse effects.

Between 62% and 65% of patients treated with the 2.5-mg dose of zolmitriptan experience pain relief within 2 hours. For some patients treated with 2.5- or 5-mg zolmitriptan, pain relief begins as soon as 45 minutes after dosing. Zolmitriptan is also effective for relieving migraine-associated symptoms. In a study by Solomon et al., compared with patients given placebo, a greater percentage of patients taking 2.5 mg of zolmitriptan reported relief of photophobia, phonophobia, and nausea 2 hours after taking the drug.

In the study by Solomon et al., 63% of patients with moderate or severe activity impairment before treatment with 2.5-mg zolmitriptan reported improvement in function within 2 hours after initial dosing. However, no information was available on whether functional impairment was completely eliminated by this point. Nevertheless, patients taking zolmitriptan lost slightly less time from work than did those given placebo. Patients taking zolmitriptan also had a lower rate of headache recurrence than those given placebo (22% for 2.5-mg zolmitriptan vs 30% for placebo). In other studies, the recurrence rate with zolmitriptan ranged from 21% to 27%.

The most common adverse effects of 2.5-mg zolmitriptan are atypical sensations (reported by 12% of patients in clinical trials), pain and pressure sensations (14%), digestive problems (eg, dry mouth, dyspepsia, dysphagia, and nausea) (16%), and neurologic problems (eg, dizziness, somnolence, vertigo) (17%).

No published studies have specifically assessed patient satisfaction with zolmitriptan or whether patients prefer zolmitriptan to their usual migraine therapy. The results of double-blind, placebo-controlled trials suggest that patients might prefer zolmitriptan to conventional migraine drugs because of its good efficacy and ability to relieve migraine-associated symptoms and functional disability.

Zolmitriptan apparently can be given later in the headache phase than other triptans with equally good results. However, this treatment strategy is not ideal; all patients, no matter what triptan they are taking, should be encouraged to take the medication as early in the migraine attack as possible to obtain the greatest and most rapid benefit.

### Rizatriptan

Rizatriptan is available as a conventional tablet and in an orally disintegrating formulation (wafer). Rizatriptan is available in 5-mg and 10-mg doses; for most patients, the 10-mg dose provides the greatest response. In clinical trials, between 67% and 77% of patients treated with 10-mg rizatriptan reported pain relief within 2 hours. Notably, compared with patients given placebo, significantly more patients taking 10-mg rizatriptan experience pain relief within 30 minutes after drug administration. Between 42% and 48% of patients treated with 10-mg rizatriptan are able to function normally within 2 hours after taking the drug, based on a stringent measure of functional disability (the absence of any disability whatsoever). Return to normal functioning is aided by the ability of rizatriptan to relieve migraine-associated symptoms. Within 2 hours after dosing, nausea, photophobia, and phonophobia are alleviated in 60% to 77% of patients given 10 mg of rizatriptan.

Adverse effects associated with rizatriptan are similar to those of other
Triptans. The most common adverse effects reported by patients treated with 10-mg rizatriptan in clinical trials included pain and other pressure sensations (reported by 9% of patients), dizziness (9%), somnolence (8%), and asthenia or fatigue (7%).

Headache recurrence rates with rizatriptan are also similar to those reported for other triptans. More than 80% of patients obtain relief from headache recurrence with a second rizatriptan dose.39 Many patients have a better response to rizatriptan than to the nontriptan medications they had been using. Thirteen percent of patients taking the rizatriptan tablet and 19% of those taking the rizatriptan orally disintegrating tablet (waffer) reported pain relief within 30 minutes of dosing; when taking their nontriptan medication, only 7% of patients had pain relief within 30 minutes. Significantly more patients treated with rizatriptan were able to return to normal activities within 2 hours and had no or only mild pain within 2 hours as opposed to those taking nontriptan medications. With these improved treatment outcomes, patients were significantly more satisfied (very or somewhat satisfied) with rizatriptan than with their usual therapy (73% for rizatriptan tablets and 76% for rizatriptan wafers vs 34% for nontriptan medications).

**Naratriptan**

Based on clinical trial results, naratriptan seems less likely than other available triptans to satisfy patients’ clear desire for rapid pain relief. In clinical trials of naratriptan, the primary end point was pain relief at 4 hours (the primary end point in trials of other triptans was pain relief at 2 hours). Although 60% to 66% of patients treated with 2.5-mg naratriptan reported pain relief within 4 hours, only an estimated 48% of patients taking naratriptan experienced pain relief at 2 hours (a more widely used and accepted end point).26 Naratriptan at the 2.5-mg dose is effective for migraine-associated symptoms (relieves nausea within 2 hours in 55%-60% of patients, photophobia in 37%-42%, and phonophobia in 43%-47%). At 4 hours, 71% to 75% of patients taking 2.5 mg of naratriptan had no nausea, 57% to 61% had no photophobia, and 57% to 65% had no phonophobia.27,28 Return to normal functioning was specifically assessed in only 1 clinical trial. In this study, within 4 hours of dosing, 70% of patients treated with 2.5-mg naratriptan were able to function normally or had only a mild impairment in ability to function.27

A recently published report of an open-label trial found that patients preferred naratriptan to conventional migraine therapy.41 In this study, patients were asked to treat 3 migraine attacks with 2.5-mg naratriptan and record their responses in a diary. Of the 143 patients participating in this study, 62% had previously used a triptan (lack of prescribing was the primary reason these patients did not continue to use a triptan). Among the nontriptan agents used to treat migraine, 59% of patients took simple analgesic agents, 46% used combination products, and 13% used narcotic agents. At the end of the study, patient satisfaction with migraine therapy increased from 47% to 75%. Also, 63% of patients preferred naratriptan to their previous nontriptan medication, while 27% preferred their nontriptan medication, and 10% had no preference. The principal reasons patients preferred naratriptan was that it effectively relieved their pain and allowed them to return to normal functioning.
The percentage of patients experiencing adverse effects with naratriptan is low. In clinical trials of 2.5-mg naratriptan, atypical sensations were reported by 4% of patients, nausea by 7%, neurologic problems (dizziness, drowsiness, malaise, or fatigue) by 7%, and pain and other pressure sensations by 4%.25 Two studies found headache recurrence in 27%,27 and 28%28 of patients, respectively; another found a 45% recurrence rate.26 Nonetheless, naratriptan may be appropriate for patients whose migraines frequently recur and for those with a tendency toward triptan rebound.

Almotriptan

Almotriptan is the newest triptan to become available in the United States. Almotriptan is available in 6.25-mg and 12.5-mg tablets; in clinical trials, the 12.5-mg dose proved more effective than the 6.25-mg dose for most patients.29 Between 57% and 65% of patients treated with 12.5-mg almotriptan reported pain relief within 2 hours after taking the drug.29 The incidence of adverse effects with almotriptan is low. The most common adverse effects reported in clinical trials of 12.5-mg almotriptan were nausea in 2% of patients, dry mouth in 1%, and paresthesia in 1%.29

The low incidence of adverse effects with almotriptan is a positive attribute for patients. In a comparison of treatment satisfaction, functional status, and health-related quality of life in 1173 patients treated with 12.5-mg almotriptan or 50-mg sumatriptan, no significant differences in treatment satisfaction were seen between the 2 groups in terms of pain relief.43 However, when treatment satisfaction was based on adverse events, patients were significantly more satisfied with almotriptan than with sumatriptan (P = .02). Improvement in functional disability, however, did not differ between groups.

**Comparison Studies**

Although none of the triptans meets all the criteria established by patients for an ideal migraine drug, some may be better than others in meeting patients' needs. Data from comparison trials therefore are useful21,22,24,30,44-46 (Table 3).

Rizatriptan vs Sumatriptan

Ten-milligram rizatriptan seems to have some advantages over 50- and 100-mg sumatriptan in satisfying patient treatment preferences. In a study by Goldstein et al,41 10-mg rizatriptan provided faster and greater pain relief as well as greater improvement in functional disability than did 50-mg sumatriptan. In this trial of 1329 patients, 10-mg rizatriptan and 50-mg sumatriptan were similarly effective in relieving pain within 2 hours, but rizatriptan was significantly more effective than sumatriptan in providing complete pain relief within 1 hour. Significant differences favoring rizatriptan also emerged between the 2 groups in relief of nausea, ability to return to normal functioning, and overall satisfaction with the medication.

In a study comparing 10-mg rizatriptan with 100-mg sumatriptan, rizatriptan was superior to sumatriptan on several efficacy measures, including pain relief at 1 hour, pain free at 1.5 and 2 hours, return to normal functioning at 2 hours, and complete relief of nausea at 2 hours.22 Rizatriptan doses of 10 mg

### Table 3. Comparison of the Ability of Triptans to Satisfy Selected Patient Treatment Preferences

<table>
<thead>
<tr>
<th>Patient Treatment Preference</th>
<th>Rizatriptan, 10 mg, vs Sumatriptan, 50 mg21</th>
<th>Rizatriptan, 10 mg, vs Sumatriptan, 100 mg22</th>
<th>Zolmitriptan, 2.5 mg, vs Sumatriptan, 50 mg46</th>
</tr>
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<tbody>
<tr>
<td>Rapid pain relief</td>
<td>Rizatriptan and sumatriptan were similarly effective in relieving pain within 2 h</td>
<td>Rizatriptan was significantly more effective than sumatriptan in relieving pain within 1 h</td>
<td>Zolmitriptan was significantly more effective than sumatriptan in relieving pain within 2 h</td>
</tr>
<tr>
<td>Complete pain relief (ie, pain free)</td>
<td>Rizatriptan was significantly more effective than sumatriptan in completely relieving pain within 1 h</td>
<td>Rizatriptan was significantly more effective than sumatriptan in completely relieving pain within 1.5 h</td>
<td>Data not reported</td>
</tr>
<tr>
<td>Relief of associated symptoms</td>
<td>Rizatriptan was significantly more effective than sumatriptan in relieving nausea within 1 h and photophobia and phonophobia within 4 h</td>
<td>Rizatriptan was significantly more effective than sumatriptan in relieving nausea within 2 h; no significant differences between rizatriptan and sumatriptan in relief of photophobia and phonophobia</td>
<td>Data not reported (&quot;meaningful migraine relief,&quot; which encompassed all migraine symptoms, was higher for zolmitriptan than for sumatriptan)</td>
</tr>
<tr>
<td>Return to normal function</td>
<td>Rizatriptan was significantly more effective than sumatriptan in return to normal function within 1 h</td>
<td>Rizatriptan was significantly more effective than sumatriptan in return to normal function within 2 h</td>
<td>Data not reported</td>
</tr>
<tr>
<td>Reduction in headache recurrence</td>
<td>Rizatriptan and sumatriptan were similar in percentage of patients with headache recurrence within 24 h</td>
<td>Rizatriptan and sumatriptan were similar in percentage of patients with headache recurrence within 1 h</td>
<td>Headache recurrence rate was slightly lower for zolmitriptan than for sumatriptan</td>
</tr>
<tr>
<td>Minimal adverse effects</td>
<td>Rizatriptan and sumatriptan were similar in incidence of adverse effects</td>
<td>Rizatriptan caused significantly fewer drug-related adverse effects than did sumatriptan</td>
<td>Zolmitriptan and sumatriptan had a similar incidence of adverse effects</td>
</tr>
</tbody>
</table>

*Study enrolled only patients who had not responded to sumatriptan.*
Rizatriptan, 10 mg, vs Zolmitriptan, 2.5 mg
Rizatriptan, 10 mg, vs Zolmitriptan, 5 mg
Rizatriptan, 10 mg, vs Naratriptan, 2.5 mg
Almotriptan, 12.5 mg vs Sumatriptan, 50 mg

Rizatriptan provided more rapid pain relief in a greater percentage of patients than did zolmitriptan. Rizatriptan provided complete pain relief in greater percentage of patients at both 1 and 2 h than did zolmitriptan. Rizatriptan was significantly more effective than zolmitriptan in relieving nausea and photophobia (no difference seen in relief of vomiting).

Data not reported
Rizatriptan was significantly more effective than zolmitriptan in return to normal function from 1.5 h onward.
Rizatriptan and zolmitriptan were similar in percentage of patients with headache recurrence within 24 h.
Rizatriptan and zolmitriptan had a similar incidence of adverse effects.

Rizatriptan was significantly more effective than zolmitriptan in relief of pain within 1 h. Rizatriptan was significantly more effective than naratriptan in completely relieving pain within 1 h. Rizatriptan provided earlier relief of nausea, photophobia, and phonophobia than did naratriptan.

Data not reported
Rizatriptan was significantly more effective than zolmitriptan in return to normal function within 2 h.
Rizatriptan and zolmitriptan were similar in percentage of patients with headache recurrence.
Rizatriptan and zolmitriptan had a similar incidence of adverse effects.

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Data not reported
Heads recurred in a greater percentage of patients taking rizatriptan compared with naratriptan. Rizatriptan caused more drug-related adverse effects than did naratriptan.

Also caused significantly fewer drug-related adverse effects than did 100-mg sumatriptan. The ability of rizatriptan to rapidly relieve migraine pain clearly is important to patients. In a study of 386 migraineurs, significantly more patients preferred 10-mg rizatriptan (wafer formulation) to 50-mg sumatriptan. In this study also concluded that patients taking zolmitriptan were significantly more likely to have pain relief over 24 hours than were those given sumatriptan.

In a patient preference study by Pascual et al., more rapid pain relief was the most important reason cited by patients for preferring 2.5-mg zolmitriptan to 50-mg sumatriptan. In this study, 100 migraineurs treated 3 migraine attacks with zolmitriptan or sumatriptan. Among the 94 patients who completed the study, 44% preferred zolmitriptan, 29% preferred sumatriptan, and 27% had no preference. In addition to speed of pain relief, patients preferred zolmitriptan because of its duration of effect, fewer adverse effects, and lower price.

Zolmitriptan vs Sumatriptan

A recently published report suggests that 2.5-mg zolmitriptan might be somewhat more effective than 50-mg sumatriptan. In this study of 1445 patients with migraine, 2.5-mg zolmitriptan was significantly more likely than 50-mg sumatriptan to relieve pain at 2 hours and 4 hours; at 2 hours, 67% of patients taking 2.5-mg zolmitriptan and 64% of those given 50-mg sumatriptan reported pain relief (P = .02). The investigators in this study also concluded that patients taking zolmitriptan were significantly more likely to have pain relief over 24 hours than were those given sumatriptan.

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Rizatriptan vs Zolmitriptan

Compared with zolmitriptan, rizatriptan seems to offer several advantages. In a randomized, double-blind, placebo-controlled trial of 766 patients, 10-mg rizatriptan was more effective than 2.5-mg zolmitriptan in speed of pain relief, complete pain relief, relief of functional disability, and relief of nausea and photophobia. In this trial, significantly more patients taking rizatriptan were completely pain free at 2 hours than were those treated with zolmitriptan (43% vs 36%; P = .04). Patients taking rizatriptan also were more likely than those given zolmitriptan to experience sustained complete pain relief (ie, no recurrence of pain or need for additional medication) within 24 hours after dosing among patients who initially reported being pain free within 2 hours after dosing). Significantly more patients in the rizatriptan group than in the zolmitriptan group reported pain relief within 1 hour (43% vs 35%; P = .03). Moreover, compared with patients taking zolmitriptan, patients given rizatriptan were more likely to be able to function normally within 1.5 hours and afterward; at 2 hours, 45% of patients in the rizatriptan group and 37% of those in the zolmitriptan group had no functional disability (P = .03).

An open-label study comparing 10-mg rizatriptan with 5-mg zolmitriptan in patients who had not responded to sumatriptan further suggests that rizatriptan might
be a better choice in this patient population. In this trial, rizatriptan had a more rapid onset of effect (mean ± SD time to onset, 35 ± 10 minutes vs 45 ± 9 minutes), relieving pain in 81% of patients within 2 hours, compared with 73% of patients taking zolmitriptan. At 1 hour, 29% of patients treated with rizatriptan and 21% of those given zolmitriptan were pain free. Rizatriptan also was rated higher than zolmitriptan on a patient satisfaction index. This study also supports the clinical observation that failure to respond to one triptan does not mean a patient will not respond to another, as evidenced by the high response rate to rizatriptan and zolmitriptan among patients who had not responded to sumatriptan when using that drug to treat 5 migraine attacks.

Rizatriptan vs Naratriptan

In a study of 522 migraineurs, 10-mg rizatriptan relieved pain and provided complete pain relief more quickly than did 2.5-mg naratriptan; rizatriptan also provided faster relief of migraine-associated symptoms and allowed patients to return to normal activities sooner. Over all, rizatriptan seemed to better meet patients’ needs, as reflected in scores on a 7-point medication satisfaction scale in which lower scores indicated greater satisfaction (i.e., 1 indicated completely satisfied and 7, completely dissatisfied). At 2 hours, the mean score was 3.55 for rizatriptan vs 4.21 for naratriptan (P<.001).

Almotriptan vs Sumatriptan

In a double-blind, randomized trial of 1255 patients, 12-mg almotriptan and 50-mg sumatriptan proved equally effective in relieving migraine pain. At 2 hours, 58% of patients taking almotriptan and 57% of those given sumatriptan reported pain relief. However, compared with the almotriptan group, significantly more patients in the sumatriptan group reported being pain free at 2 hours (25% vs 18%; P = .005). Although no significant differences in complete pain relief between groups were seen at 0.5 hour or 1 hour, this finding suggests that almotriptan might be less likely than sumatriptan to meet patients’ preference for complete relief of pain.

In this study, almotriptan and sumatriptan were comparable in their ability to relieve migraine-associated symptoms, and no significant differences were seen in the percentage of patients reporting recurrence (headache recurred within 24 hours in 27% of patients in the almotriptan group and 24% of those in the sumatriptan group). Significant differences were seen in the incidence of adverse effects, with treatment-related events being lower in the almotriptan group (9% vs 16%; P = .001). Based on the results from this comparative trial, almotriptan causes few adverse effects, a desirable attribute, but is less likely than sumatriptan to completely relieve pain within 2 hours.

CONCLUSIONS

Patients with migraine have clear treatment preferences in migraine medication. They generally want a drug that provides rapid, complete relief of pain and migraine-associated symptoms, and prefer the rapid return to their normal activities, prevents the headache from recurring, and causes few adverse effects. Indeed, patients may have specific preferences; for example, some may prefer the convenience of oral administration while others seek the rapid onset of effect provided by a subcutaneous drug. In all cases, physicians need to recognize the needs of their patients with migraine and seek out the medications that will best meet these needs.

The triptan class of migraine drugs provides many of the attributes patients seek in a migraine medication. With all the drugs in this class, most patients experience relief of pain and relief of associated symptoms (e.g., nausea, photophobia, phonophobia) within 2 hours after dosing. In comparison trials, some differences among the triptans emerge, although further studies are necessary to confirm whether one triptan relieves pain better or more rapidly than another. Until clear distinctions among the drugs in this class emerge, physicians can be confident that each of the currently available triptans satisfies many of the treatment preferences expressed by patients with migraine.

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