Optimizing the Acute Treatment of Migraine: The Importance of Communication and Setting Appropriate Goals With Patients

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Key Learning Points

- Nearly 1 billion people worldwide are affected by migraines
- Several unmet needs remain in the acute treatment of migraine, including limitations with current treatments, misdiagnoses, and suboptimal clinician-patient communication
- The goals of acute treatment should include rapid and consistent freedom from pain without recurrence, restored ability to function without the need for repeat dosing or rescue treatment, and minimal or no adverse events (AEs)
- Approaches exist to help clinicians make accurate and timely diagnoses, and improve clinician-patient communication, in an effort to help meet the goals of acute treatment
Introduction

Migraine is a neurological disease characterized by attacks of throbbing headache—which is often associated with photophobia, phonophobia, nausea, vomiting, and a myriad of other symptoms, including cognitive dysfunction and dizziness—that lasts from 4 to 72 hours. 4,5 Nearly 39 million people in the United States, and 1 billion people globally, are affected by migraine. 1 With its disruptive constellation of symptoms, it is one of the leading causes of disability worldwide. 6 Migraine disproportionately affects women, who are 3 times more likely to experience migraine compared with men. 4 Because of the physical and psychological effects of migraine, many patients experience restrictions in their daily activities, ability to work and socialize, and their overall quality of life. 7,8

The recent Global Burden of Disease study demonstrated that migraine is the second most common cause of years lived with disability (YLD) worldwide, following low back pain. 6 Another study found that people with migraine experienced a diminished quality of life that is comparable to that of people with chronic conditions such as congestive heart failure, hypertension, depression, or diabetes. 9 In addition to causing patient distress, migraine causes a considerable financial burden, with annual total costs estimated at $27 billion in the United States. 4 In Europe, the annual per-person cost for migraine care is €1177, with 93% of that attributed to indirect costs. 10

In the last 30 years, advances in care have led to progress in the management of this disabling neurological disease. However, unmet needs remain. In this outsert, we detail some of the remaining unmet needs for the acute treatment of migraine (ie, treatments used to reduce or terminate the symptoms of a migraine attack) including the limitations of current acute treatments and how suboptimal treatment may lead to poor outcomes. We will also discuss approaches to making an accurate and timely diagnosis of migraine as well as the importance of communication between patients and clinicians. Finally, we will outline potential strategies for achieving the goals for the acute treatment of migraine in order to improve patient outcomes.
What Are the Goals of Acute Treatment?

Recently, the American Headache Society (AHS) recommended that the goals of acute treatment include rapid and consistent freedom from pain, restored ability to function without the need for repeat dosing or rescue treatment, with minimal or no AEs (Figure 1). The AHS also recommended that all patients with migraine be offered a trial with acute treatment. Despite the availability of triptans and other acute treatments today, many migraine patients do not achieve these treatment goals. For example, in the Migraine in America Symptoms and Treatment (MAST) study, 26% of patients reported the use of oral acute treatments, yet 96% reported having at least 1 unmet need.11

Historically, misdiagnosis has been prevalent among patients with migraine, as migraine symptoms may mimic those of other conditions.13 There are various tools available to help clinicians diagnose migraine. One such validated and reliable tool is the 3-item ID Migraine™ screener (Figure 2), which enables rapid diagnosis of migraine by helping HCPs assess their patients for the presence of headache disability, nausea, and/or photophobia. The ID Migraine screener has high sensitivity and specificity; if the patient tests positive for 2 or all 3 items, a migraine diagnosis can be made (positive predictive value of 93% with 2 items and 98% with all 3 items). With its ease of use and the fact that it has been validated in various settings, this tool may significantly improve migraine recognition in many disciplines.14

Has a headache limited your activities for a day or more in the past 3 months?
Are you nauseated or sick to your stomach when you have a headache?
Does light bother you when you have a headache?

Figure 2. ID Migraine™ Screener14
Adapted from Lipton RB et al. Neurology. 2003;61(3):375-382.14

Many Patients Using Today’s Acute Treatments Experience Migraine Recurrence, Disability, and Lack of Sustained Response

The American Migraine Prevalence and Prevention (AMPP) study with 8233 people with migraine has shown that more than half of patients have an inadequate initial response after taking their acute treatment (Figure 3). Of those patients, about 3 in 4 had an inadequate response 24 hours after dosing. Furthermore, about 1 in 4 of the patients in the study who initially had
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8233 patients with migraine reported outcomes after acute treatment

Figure 3. The AMPP Study: Patient-Reported Response Rates of Triptans at 2 and 24 Hours

an adequate response experienced pain recurrence within 24 hours. Currently, the most commonly used prescription medication class for acute treatment is the triptans. While triptans may provide effective relief for many patients, limitations still exist. For example, a systematic review and meta-analysis of 133 controlled trials with triptans revealed that about 67% to 82% and 20% to 34% of patients taking a triptan either experience recurrence (return of migraine pain) or use rescue medication within 24 hours of taking the triptan, respectively.

The limitations of triptans for acute treatment are further illustrated by real-world data on refill rates. In a recent analysis of a US claims database with adults with migraine, nearly half of new patients taking triptans had low refill rates. Another consideration with triptans is the contraindications and warnings for patients with cardiovascular (CV) disease. Over 3.5 million patients in the United States have contraindications to the use of triptans or should use with caution due to the risk of CV events.

Many patients with migraine cycle through different classes of treatments in an effort to find relief. Only about 10% of new patients taking triptans continued to use that same triptan, suggesting they are not receiving relief from their first-line triptan. However, it has been shown in the AMPP study that switching from one triptan to another, or from a triptan to a barbiturate, opioid, or nonsteroidal anti-inflammatory drug does not result in improvements in headache-related disability, and, in some cases, disability increased. These findings further establish the need for treatment options that can help patients achieve their unmet treatment goals.

The Dangers of Suboptimal Outcomes Include Increased Opioid and Barbiturate Use and Progression to Chronic Migraine

When current acute treatments are suboptimal, many patients will be prescribed opioids and barbiturates to control symptoms. Although it is recommended that these agents be used sparingly and not as first-line agents, many migraine patients are prescribed opioids or barbiturates because of uncontrolled symptoms. In the MAST study, nearly 33% and 11% of patients used opioids and barbiturates, respectively. Many patients in Europe also report inadequate relief from currently available treatment options for migraine. In a survey from 2012 of 5655 patients from 5 European countries, ≈14% to ≈50% of patients used opioid-containing treatments to treat their migraines.
Additionally, in a recent analysis of 11,301 migraine records, ≈7% of patients with migraine used opioids as acute treatment.\textsuperscript{27} Furthermore, optimal acute treatment for every patient is extremely important, given recent findings that suboptimal acute treatment doubles the risk of progression to Chronic Migraine, a higher frequency and highly disabling stage of migraine.\textsuperscript{28} Opioids and barbiturates were also found to independently increase the risk of medication-overuse headache (MOH) and migraine progression.\textsuperscript{29,30}

**Suboptimal acute treatment doubles the risk of progression to Chronic Migraine.**\textsuperscript{28,31}

### Why Are Patients Not Taking Their Acute Treatments for Migraine on Time or at All?

Now, let’s consider some treatment-specific factors leading to suboptimal care. A study found that 40% of patients do not take their treatment within 1 hour of headache onset, and half of patients reported that they wanted to reserve their medication until a severe migraine evolves, which is when treatments are less efficacious.\textsuperscript{32} In fact, a multicenter, open-label, randomized study that enrolled 2443 patients found that, at comparable pain intensity, early treatment is associated with better outcomes than when patients wait to take their medication.\textsuperscript{33}

It has been found that two-thirds of migraine patients delay or avoid taking their current medication due to concerns about AEs.\textsuperscript{34} A group of AEs termed “triptan sensations” that are common to triptans may contribute to undertreatment. Triptan sensations include facial flushing, chest pressure/tightness, and tingling.\textsuperscript{35} Delaying or avoiding taking medication results in patients developing more pain, greater loss of function, and suboptimal performance.\textsuperscript{36}

**Two-thirds of migraine patients delay or avoid taking their current medication due to concerns about AEs.**\textsuperscript{34}

Conversely, many patients who receive inadequate treatment have the potential to overuse medication in an effort to find relief.\textsuperscript{3} Further complicating inadequate treatments and assessment, patients who overuse acute treatments have the danger of developing MOH. MOH is headache that occurs on 15 or more days per month as a consequence of regular overuse of acute headache medication on 10 or more days per month (15 or more days for simple analgesics such as acetaminophen) for at least 3 months.\textsuperscript{5} MOH typically will resolve after the overuse of medication is ceased.\textsuperscript{5} It should be stated that migraine progression and MOH have been associated with all classes of currently available acute treatments.\textsuperscript{3}

### Clinician and Patient Treatment Goals—Is There a Disconnect?

Communication with patients is paramount to accurately assess their symptoms. Assessment of headache frequency, severity, and associated impairment is a major determinant of optimal treatment and can be assessed only through dialogue.\textsuperscript{3} One study suggested that there is a gap in communication between clinicians and patients in terms of their treatments, outcomes, and expectations. The survey found that 55% of clinician-patient pairs have a disconnect in communication and are not on the same page when discussing symptoms of migraine. In fact, only 10% of clinicians asked patients about impairment due to migraine, and, as a result, 51% misjudged patients’ impairment.\textsuperscript{3} In a study that assessed treatment goals and outcomes between patients and clinicians, patients ranked “consistent response” and “low recurrence” higher than did clinicians, further highlighting this disconnect. Many migraine patients reported feeling “dismissed” by clinicians who did not appear to take complaints of headache pain seriously.\textsuperscript{36} These findings support the need to enhance the clinician and patient dialogue in order to help patients feel understood. Assessment of headache frequency, severity, and associated impairment can be fundamentally improved through strong dialogue patterns between clinicians and patients—as these areas are major determinants of optimal treatment.\textsuperscript{3}

**There is a need to enhance the clinician-patient dialogue in order to optimize migraine treatment.**
A Disconnect Exists—What Can Be Done Now?

Using closed-ended (yes/no, short-answer) questions during the migraine evaluation process impairs the ability of a clinician to understand how migraine impacts their patients’ lives. A variety of tools exist to help improve communication between clinicians and patients. Some of these approaches include the “Ask-Tell-Ask” approach and the introduction of open-ended questions (Figure 4).

<table>
<thead>
<tr>
<th>Potential Open-Ended Questions</th>
<th>Example of “Ask-Tell-Ask” Approach</th>
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</thead>
<tbody>
<tr>
<td>• How do migraines make you feel—even when you aren’t having one?</td>
<td><strong>ASK:</strong></td>
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<tr>
<td>• How does migraine impact your daily life?</td>
<td>• “How many migraines do you get each month?” and</td>
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<tr>
<td>• Can you describe the impact migraines have on your work, family, and social life?</td>
<td>• “How long does each attack typically last?”</td>
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<tr>
<td>• How does having migraine make you feel?</td>
<td><strong>TELL:</strong> Re-phrase what you’ve heard and ask for confirmation from the patient</td>
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<tr>
<td>• Describe how your migraines affect you between attacks.</td>
<td>• “So, you get 3 attacks that last 2 days each—meaning that you are disabled 6 days a month.”</td>
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<tr>
<td></td>
<td><strong>ASK:</strong></td>
</tr>
<tr>
<td></td>
<td>• “Is that right?”</td>
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</table>

Figure 4. Methods to Improve Clinician/Patient Communication


In addition, several questionnaires and tools exist to help facilitate conversations with patients and their response to and satisfaction with their treatment. These include the Migraine Assessment of Current Therapy (Migraine-ACT) Questionnaire and The Migraine Treatment Optimization Questionnaire (M-TOQ). Some example questions are found below (Figure 5):

<table>
<thead>
<tr>
<th>The Migraine Treatment Optimization Questionnaire (M-TOQ)</th>
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- Are you able to quickly return to your normal activities after taking your migraine medication?
- Can you count on your migraine medication to relieve your pain within 2 hours for most attacks?
- Does one dose of your migraine medication usually relieve your headache and keep it away for at least 24 hours?
- Is your migraine medication well tolerated?

<table>
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<tr>
<th>The Migraine Assessment of Current Therapy (Migraine-ACT) Questionnaire</th>
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- Does your migraine medication work consistently, in the majority of your attacks?
- Does the headache pain disappear within 2 hours?
Enhancing clinician and patient communication, understanding the treatment gaps, and exploring novel treatment options could optimize migraine care.15,32 Assessing the patient’s headache characteristics by asking a few specific questions may be useful; questions such as:

- **How often do your headaches wake you up at night?**
- **From the time your headache begins, how long does it usually take to reach its most painful point?**
- **How quickly do you use acute treatment?**

These questions will give insights into a patient’s specific disabilities, allowing clinicians to better choose treatments.

**Summary**

Migraine is a disabling neurological disease that is highly prevalent worldwide. Migraine attacks impair patients’ ability to function normally and negatively impact private, social, and professional life.6 Misdiagnosis and underdiagnosis continue to be common.2 Clinicians should consider simple approaches to improve communication with patients and consider adopting validated and rapid tools to diagnose migraine and optimize acute treatment.3 Currently available acute treatments for migraine may be ineffective, poorly tolerated, or contraindicated in many patients.15,19,34 A focused assessment of individual patient and attack characteristics will help clinicians and their patients choose an individualized approach and the most appropriate treatment to ensure that the goals of acute migraine treatment can be achieved and patient outcomes can be optimized. In the future, novel therapies and new approaches to communication may help address the current limitations and unmet needs in the acute treatment of migraine.
References:


