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Migraine Management

What Primary Care Providers Need to Know

Introduction

Migraine is a long-term, disabling neurologic disease that has a severe impact on the lives of patients living with it.[1–3] Despite this, migraine is underdiagnosed and undertreated.[4] Migraine may be classified as chronic (≥15 headache days per month for more than 3 months) or episodic (<15 headache days per month).[5] There are currently several options for managing migraine, including pharmacologic therapy, neuromodulation devices, and behavioral treatments.[6,7] Migraine can be treated with both acute and preventive therapies, and patients who experience frequent attacks may require a multidisciplinary approach, which includes a combination of acute and preventive modalities as well as behavioral interventions as part of their treatment plan.[6] This article aims to provide an overview of available pharmacologic treatments of migraine, considerations for their use, and recommendations for monitoring treatment effectiveness in the primary care setting.

Case Highlight: Kelly

Kelly, aged 20, was diagnosed with migraine 2 years ago. At diagnosis, Kelly spent about 4 to 5 days of the month impacted by migraine. At her last assessment, Kelly said that she felt her migraine attacks were getting worse and occurring more frequently. She reports feeling more sensitive to light and touch during a migraine attack. She usually stays home from work or goes home sick about once per month. Furthermore, she often feels too tired in the evening to spend time on pastimes like reading and sewing, which she used to enjoy. She was offered a triptan as an acute treatment option, but feels it is not adequate for severe episodes. She says that she takes it as soon as she experiences early symptoms, especially if she has an important upcoming project at work.

Overview of Current Management of Migraine

Acute and preventive migraine therapies have distinct but complementary purposes: acute treatments are primarily used to abort a migraine attack, while preventive treatments are used to reduce migraine attack frequency, duration, and/or severity (**Figure 1**).[6,8]

The American Headache Society (AHS) provides evidence-based recommendations for initiation of acute and preventive treatments.[6] Acute treatments are recommended for all individuals with migraine with the goal of achieving rapid relief from pain and associated symptoms, and to restore their ability to function.[6] Currently, preventive treatments should be considered for patients in the following situations: higher migraine frequency (≥4 headache days per month) or attacks that significantly interfere with everyday routines despite acute treatment.[6] However, patients with fewer headache days per month may still experience moderate to severe migraine-related disability.[1,2,9,10] In anticipation of attacks, patients may adapt plans and

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adjust their lifestyles, such as not traveling alone in case of a migraine attack.[2,11] Preventive treatment may also be considered if acute treatment is inappropriate because of contraindication to acute medications, failure or overuse of acute medications, or adverse events associated with their use.[6]

Evidence to date shows that preventive medication may be underutilized in the clinical setting.[1] In the American Migraine Prevalence and Prevention study, which evaluated 18,968 people with migraine, 43.3% reported never having used a migraine preventive treatment.[1] Interestingly, 32.4% of this group met the expert panel criteria for offering or considering preventive treatment, which underscores the unmet need for preventive therapy in individuals who are candidates for it yet do not receive it.[1] The recent AHS position statement provides guidance on initiation and treatment with calcitonin gene-related peptide (CGRP) monoclonal antibodies (mAbs) in adults who experience at least 4 monthly headache days, have not been successfully treated with other preventive agents, and report at least moderate disability as measured by patient-reported outcome tools.[6]

Figure 1. Overview of Acute and Preventive Migraine Treatments[6,8,14,15,18,19]

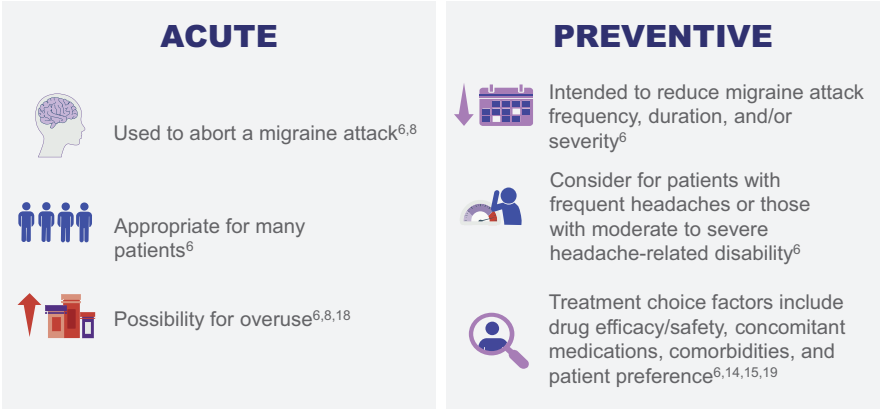
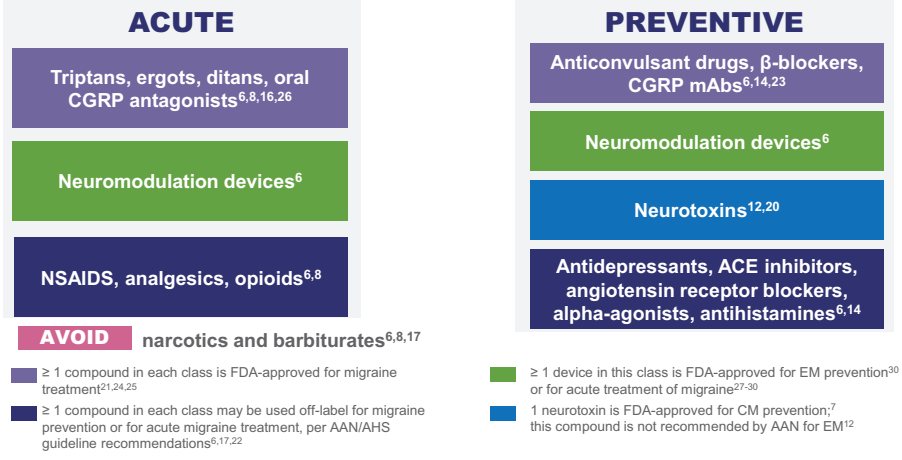


Figure 2. Treatment Classes for Acute and/or Preventive Migraine Therapy[6,8,12,14,16,20-30]



Abbreviations: AAN, American Academy of Neurology; ACE, angiotensin-converting enzyme; AHS, American Headache Society; CGRP, calcitonin gene-related peptide; CM, chronic migraine; EM, episodic migraine; FDA, US Food & Drug Administration; mAb, monoclonal antibody; NSAID, nonsteroidal anti-inflammatory drug.

Classes of Medication for Managing Migraine

Several drug classes are available or in development for the acute and/or preventive treatment of migraine (**Figure 2**).[6,8,12,13] Treatment decisions may be impacted by a drug's safety and efficacy profile, patients' comorbidities and concomitant medications, and patient preference.[6,14,15]

Both migraine-specific acute medications (eg, triptans, ergotamines, and ditans)[6,16] and non-migraine-specific acute medications (eg, analgesics and nonsteroidal anti-inflammatory drugs)[15] are approved by regulatory agencies and/or recommended by professional society guidelines for relief from migraine attacks. Narcotics and barbiturates are not recommended because of their addiction and abuse potential.[8,15]

Although some acute medications are indicated and/or recommended for aborting attacks, acute treatments can be overused, potentially leading to medication overuse headache, a type of secondary headache disorder.[5] Medication overuse headache may occur with acute migraine medications, but is common with narcotics and barbiturates; this is another reason why narcotics and barbiturates should be avoided for migraine treatment.[8,9,17] Approximately 50% of patients with chronic migraine have medication overuse headache that may revert to episodic headache after drug withdrawal.[5] As such, it is recommended that acute treatments are limited to an average of 2 headache days per week, and preventive treatment is considered for patients observed exceeding this limit.[6] Also, it is advised that acute treatments should not be used in anticipation of a migraine attack.[2]

Traditional preventive therapies in-

clude beta-blockers, anticonvulsants, and antidepressants, which are orally administered daily.[6,19] Other treatments administered by injection once every 1 to 3 months include neurotoxins and anti-CGRP mAbs.[6] Neurotoxins are approved for the prevention of chronic migraine, while anti-CGRP mAbs are approved for the prevention of both episodic and chronic migraine.[6,12]

Assessing Treatment Effectiveness and Migraine-Related Symptoms

After initiating a new pharmacologic treatment for migraine or changing an existing treatment, regular follow-up visits are recommended to assess any changes in the frequency and severity of attacks, and to evaluate migraine-related symptoms.[9] Follow-up visits are also recommended to identify and address any adverse reactions to the treatment, monitor medication use, and ensure adherence to therapy.[9]

For a more accurate assessment of treatment effectiveness, it is recommended that patients keep a headache diary to capture changes in attack frequency and severity as well as medication use.[6,9] Treatment effectiveness can also be evaluated using a number of available and validated patient-reported outcome tools.[6] Assessing a patient's symptoms prior to treatment and routinely throughout treatment can help assess change in duration and severity of symptoms, functional disability, and quality of life following therapy.[2]

Some examples of validated migraine-specific patient-reported outcome tools (**Table 1**) include the MIDAS (Migraine Disability Assessment Test), HIT-6™ (Headache Impact Test), and MSQ (Migraine-specific Quality of Life Questionnaire).[2,6] Monitoring treatment effectiveness by assessing reduction in migraine frequency and/or clinically meaningful reductions in the scores of patient-reported outcome tools can help decide whether a patient should continue treatment, and may facilitate access and reimbursement.[6] Furthermore, open communication is important and can be as simple as asking open-ended questions, to allow the patient to describe their experience in their own words.[2]

Case Highlight: Kelly

Because Kelly uses her acute medication often and seems to be starting to use it in anticipation of a migraine, you worry that Kelly may be at risk of medication overuse, which could eventually lead to medication overuse headache. Although Kelly's migraine frequency is not high, it has a substantially negative impact on her quality of life.

Kelly experiences more than 4 headache days per month with moderate disability, which qualifies her for consideration of preventive medication. You suggest that she start with an 8-week trial of a beta-blocker, which has historically established efficacy in migraine prevention.[6]

Conclusions

There is a range of acute and preventive pharmacologic treatment options for managing migraine.[6,8] All patients with migraine should be offered a trial of acute treatments, while preventive treatments may be offered or considered for patients with frequent attacks and those who report moderate to severe headache-related disability, noting that not only chronic, but also episodic migraine may have a substantial negative impact on patients' lives.[6,9,10] There are several medication classes for both acute and/or preventive therapies; the choice of treatment should take into consideration individual needs in terms of efficacy, adverse effects, comorbidities, and patient preference.[6,8] Validated patient-reported outcome tools may be used to assess treatment benefit and monitor migraine-related symptoms.[6,9] Patients with migraine may successfully manage their conditions and minimize impact on their lives with the support of their health care teams within primary care.[6]

Table 1. Validated Migraine-Specific Patient-Reported Outcome Tools[6,31-34]

Name	Full name	Description	Clinical meaning
MIDAS	Migraine Disability Assessment Test	Five questions about disability associated with headache over three domains in the previous 3 months	Moderate disability: score >11 Clinically meaningful improvement: • For baseline score 11–20: reduction of ≥5 points • For baseline score >20: reduction of ≥30%
HIT-6™	Headache Impact Test	Six-item questionnaire that assesses the severity of head pain and how it impacts a patient's daily activities	Moderate disability: score >50 Clinically meaningful improvement: reduction by at least 5 points
MSQ	Migraine-specific Quality of Life Questionnaire	Measures the impact of migraine on three dimensions of quality of life over the past 4 weeks	Clinically meaningful improvement: 5-point difference in RR and RP; 8-point difference for EF

Abbreviations: EF, emotional function; RP, role prevention; RR, role restriction.

References

1. Lipton RB, Bigal ME, Diamond M, Freitag F, Reed ML, Stewart WF. *Neurology.* 2007;68(5):343-349.
2. Buse DC, Rupnow MFT, Lipton RB. *Mayo Clin Proc.* 2009;84(5):422-435.
3. GBD 2017 Disease and Injury Incidence and Prevalence Collaborators. *Lancet.* 2018;392(10159):1789-1858.
4. Diamond S, Bigal ME, Silberstein S, Loder E, Reed M, Lipton RB. *Headache.* 2007;47(3):355-363.
5. Headache Classification Committee of the International Headache Society (IHS) The International Classification of Headache Disorders, 3rd edition. *Cephalalgia.* 2018;38(1):1-211.
6. American Headache Society. *Headache*. 2019;59(1):1-18.
7. Sun-Edelstein C, Mauskop A. *Headache.* 2011;51(8):1354.
8. Marmura MJ, Silberstein SD, Schwedt TJ. *Headache.* 2015;55(1):3-20.
9. Steiner TJ, Paemeleire K, Jensen R, et al. *J Headache Pain.* 2007;8(suppl 1).
10. Blumenfeld AM, Bloudek LM, Becker WJ, et al. *Headache.* 2013;53(4):644-655.
11. Buse DC, Scher AI, Dodick DW, et al. *Mayo Clin Proc.* 2016;91(5):596-611.
12. Simpson DM, Hallett M, Ashman EJ, et al. *Neurology.* 2016;86(19):1818-1826.
13. Do TP, Guo S, Ashina M. *J Headache Pain.* 2019;20(1):37.
14. Silberstein SD, Holland S, Freitag F, Dodick DW, Argoff C, Ashman E. *Neurology.* 2012;78(17):1337-1345.
15. Reddy DS. *Expert Rev Clin Pharmacol.* 2013;6(3):271-288.
16. Ditan [Prescribing Information]. Indianapolis, IN: Lilly USA, LLC. 2020.
17. Starling AJ, Dodick DW. *Mayo Clin Proc.* 2015;90(3):408-414.
18. Giamberardino MA, Martelletti P. *Expert Opin Emerg Drugs.* 2015;20(1):137-147.
19. D'Amico D, Tepper SJ. *Dis Treat.* 2008;4(6):1155-1167.
20. Botulinum Neurotoxin [Prescribing Information]. Madison, NJ: Allergan Pharmaceuticals. 2019.
21. Loder E. *Headache.* 2008;48(5):694-696.
22. Shapiro RE. *Headache.* 2012;52(suppl 2):65-69.
23. Sacco S, Benemei S, Cevoli S, et al. *J Headache Pain.* 2019;20(1):15.
24. US Food and Drug Administration. https://www.fda.gov/news-events/press-announcements/fda-approves-novel-preventive-treatment-migraine. Published May 17, 2018. Accessed February 4, 2020.
25. US Food and Drug Administration. https://www.fda.gov/drugs/new-drugs-fda-cders-new-molecular-entities-and-new-therapeutic-biological-products/novel-drug-approvals-2018. Updated November 14, 2019. Accessed February 4, 2020.
26. Gepants [Prescribing Information]. Madison, NJ: Allergan Pharmaceuticals. 2019.
27. Electrocore, Inc. External vagal nerve stimulator device. 510(k) FDA approval letter. November 27, 2018.
28. Theranica Bioelectronics Ltd. Trunk and limb electrical stimulator device. 510(k) FDA approval letter. May 20, 2019.
29. eNeura Therapeutics. TMS device. 510(k) FDA approval letter. May 21, 2014.
30. Cefaly Technologies. TENS device. 510(k) FDA approval letter. November 28, 2017.
31. Stewart WF, Lipton RB, Kolodner KB, Sawyer J, Lee C, Liberman JN. *Pain.* 2000;88(1):41-52.
32. Yang M, Rendas-Baum R, Varon SF, Kosinski M. *Cephalalgia.* 2011;31(3):357-367.
33. Bagley CL, Rendas-Baum R, Maglinte GA, et al. *Headache.* 2012;52(3):409-421.
34. Cole JC, Lin P, Rupnow MFT. *Cephalalgia.* 2009;29(11):1180-1187.