



MIGRAINE IN MOTION

TREATMENT ADVANCES IN MANAGEMENT AND PREVENTION

ADDITIONAL RESOURCES

Migraine treatment has a new and more powerful focus due to recently approved therapies that target migraine's underlying pathophysiologic pathways. As primary care providers are on the frontlines of caring for individuals with headaches, they are well positioned to identify those with migraine and those who may benefit from medical intervention. In this case-based session, attendees will learn about the underlying pathophysiologic mechanism, as well as safety and efficacy of new preventive therapies for episodic and chronic migraine.

Learning Objectives

As a result of participation in this educational activity, participants will increase their ability to



Describe

new advances in the pathophysiology of migraine



Develop

treatment plans in line with standards of practice for acute and preventive management of migraine



Discuss

unmet patient needs and burden of migraine



Analyze

safety and efficacy data for new and emerging therapies in acute and preventive treatment of migraine

Clinical Decision Tools

Recommended Acute Treatment of Migraine: A Guide for Providers

LEVEL A

Triptans: Sumatriptan PO, NS, SC; Zolmitriptan PO, NS; Rizatriptan PO;
Naratriptan PO; Almotriptan PO; Frovatriptan PO; Eletriptan PO

Ergots: Dihydroergotamine NS

NSAIDs: Aspirin*; Naproxen; Ibuprofen; Diclofenac

Combination: Aspirin/ Acetaminophen/Caffeine; sumatriptan/naproxen

Analgesic: Acetaminophen* for non-incapacitating attacks

LEVEL B

Ergots: Dihydroergotamine IV, SC, IM; Ergotamine tartrate/Caffeine

NSAIDs: Ketoprofen*; Flurbiprofen*; Ketorolac* IV, IM

Antiemetics: Metoclopramide* PO, IV; Prochlorperazine* IV, IM, PR;
Chlorpromazine* IV; Droperidol* IV

Others: Magnesium* IV for migraine with aura; Isometheptene

LEVEL C

Antiepileptic: Valproate* IV

Ergot: Ergotamine

Steroid: Dexamethasone* IV

All above ratings per Marmura MJ, Silberstein SD, Schwedt TJ. The Acute Treatment of Migraine in Adults: The American Headache Society Evidence Assessment of Migraine Pharmacotherapies. Headache. 2015;55:3-20.

*Not FDA-approved for acute treatment of migraine

FDA approved non-invasive neuromodulation devices for acute treatment of migraine:

External Trigeminal Stimulation, Single-pulse Transcranial Magnetic Stimulation, non-invasive Vagal Nerve Stimulation

Not recommended for acute treatment of migraine: opioids of any sort or butalbital combinations

Clinical Decision Tools

Recommended Preventive Treatment of Migraine: A Guide for Providers

LEVEL A FOR EPISODIC MIGRAINE (≥ 2 CLASS I TRIALS):

Anti-epilepsy Drugs: Valproate/divalproex; topiramate

Beta blockers: Propranolol; Timolol; Metoprolol*

ARBs: Candesartan*

LEVEL A FOR CHRONIC MIGRAINE (≥ 2 CLASS I TRIALS):

OnabotulinumtoxinA

LEVEL A FOR BOTH EPISODIC AND CHRONIC MIGRAINE (≥ 2 CLASS I TRIALS):

Monoclonal Antibodies: Erenumab; Fremanezumab; Galcanezumab

LEVEL B FOR EPISODIC MIGRAINE (1 CLASS I OR 2 CLASS II STUDIES):

Tricyclic antidepressants: Amitriptyline*

SNRIs: Venlafaxine*

Beta blockers: Nadolol*; Atenolol*

ACE inhibitors: Lisinopril*

LEVEL U (INADEQUATE OR CONFLICTING DATA TO SUPPORT OR REFUTE USE):

Calcium channel blockers: Verapamil; nifedipine

Anti-epilepsy drugs: Gabapentin

SSRIs: Fluoxetine

*Not FDA-approved for migraine prevention

FDA approved non-invasive neuromodulation devices for migraine:

External Trigeminal Stimulation, Single-pulse Transcranial Magnetic Stimulation

Updated in 2019 from the most recent US guidelines of 2012: Silberstein SD, Holland S, Freitag F, Dodick DW, Argoff C, Ashman E. Evidence-based guideline update: pharmacologic treatment for episodic migraine prevention in adults. *Neurology*. 2012;78:1337-1345.

Key Presentation References

- Afridi SK. [Current concepts in migraine and their relevance to pregnancy](#). *Obstet Med*. 2018;11(4):154-159.
- American Headache Society. [The American Headache Society Position Statement on Integrating New Migraine Treatments Into Clinical Practice](#). *Headache*. 2019;59(1):1-18.
- American Migraine Foundation. [Headache Prevention With Complementary and Alternative Medicine](#). American Migraine Foundation website. Available at: <https://americanmigrainefoundation.org/resource-library/headache-prevention-complementary-alternative-medicine>. Updated June 3, 2009. Accessed June 13, 2019.
- American Migraine Foundation. [Pregnancy and lactation – migraine management](#). American Migraine Foundation website. Available at: <https://americanmigrainefoundation.org/resource-library/pregnancy-lactation-migraine-management/>. Updated April 11, 2015. Accessed June 13, 2019.
- Barbanti P, Fabbri G, Pesare M, Vanacore N, Cerbo R. [Unilateral cranial autonomic symptoms in migraine](#). *Cephalgia*. 2002;22(4):256-259.
- Benarroch EE. [CGRP: sensory neuropeptide with multiple neurologic implications](#). *Neurology*. 2011;77(3):281-287.
- Blumenfeld AM, Varon SF, Wilcox TK, et al. [Disability, HRQoL and resource use among chronic and episodic migraineurs: results from the International Burden of Migraine Study \(IBMS\)](#). *Cephalgia*. 2011;31(3):301-315.
- Brain SD, Williams TJ, Tippins JR, Morris HR, MacIntyre I. [Calcitonin gene-related peptide is a potent vasodilator](#). *Nature*. 1985;313(5997):54-56.
- Buse DC, Manack A, Serrano D, Turkel C, Lipton RB. [Sociodemographic and comorbidity profiles of chronic migraine and episodic migraine sufferers](#). *J Neurol Neurosurg Psychiatry*. 2010;81(4):428-432.
- Cady RK, Munjal S, Cady RJ, Manley HR, Brand-Schieber E. [Randomized, double-blind, crossover study comparing DFN-11 injection \(3 mg subcutaneous sumatriptan\) with 6 mg subcutaneous sumatriptan for the treatment of rapidly-escalating attacks of episodic migraine](#). *J Headache Pain*. 2017;18(1):17.
- Centers for Disease Control and Prevention. [State Population Projections 2004-2030 Request](#). Centers for Disease Control and Prevention website. Available at: <https://wonder.cdc.gov/population-projections.html>. Accessed June 13, 2019.
- Depre C, Antalík L, Starling A, et al. [A randomized, double-blind, placebo-controlled study to evaluate the effect of erenumab on exercise time during a treadmill test in patients with stable angina](#). *Headache*. 2018;58(5):715-723.
- Detke HC, Goadsby PJ, Wang S, Friedman DI, Selzler KJ, Aurora SK. [Galcanezumab in chronic migraine: the randomized, double-blind, placebo-controlled REGAIN study](#). *Neurology*. 2018;91(24):e2211-e222.
- Dodick DW. [Diagnosing headache: clinical clues and clinical rules](#). *Adv Stud Med*. 2003;3(2):87-92.
- Edvinsson L, Haanes KA, Warfvinge K, Krause DN. [CGRP as the target of new migraine therapies - successful translation from bench to clinic](#). *Nat Rev Neurol*. 2018;14(6):338-350.
- Edvinsson L, Uddman R. [Neurobiology in primary headaches](#). *Brain Res Brain Res Rev*. 2005;48(3):438-456.
- Edvinsson L. [The CGRP pathway in migraine as a viable target for therapies](#). *Headache*. 2018;58(suppl 1):33-47.
- Eross E, Dodick D, Eross M. [The Sinus, Allergy and Migraine Study \(SAMS\)](#). *Headache*. 2007;47(2):213-224.
- Goadsby PJ, Lipton RB, Ferrari MD. [Migraine--current understanding and treatment](#). *N Engl J Med*. 2002;346(4):257-270.
- Ha H, Gonzalez A. [Migraine headache prophylaxis](#). *Am Fam Physician*. 2019;99(1):17-24.
- Hargreaves RJ, Shephard SL. [Pathophysiology of migraine--new insights](#). *Can J Neurol Sci*. 1999;26 (suppl 3):S12-S19.

Key Presentation References

Headache Classification Committee of the International Headache Society (IHS). [The International Classification of Headache Disorders, 3rd edition](#). *Cephalalgia*. 2018;38(1):1-21

Hepp Z, Dodick DW, Varon SF, et al. [Persistence and switching patterns of oral migraine prophylactic medications among patients with chronic migraine: a retrospective claims analysis](#). *Cephalalgia*. 2017;37(5):470-485.

Institute for Clinical Systems Improvement. [Diagnosis and Treatment of Headache. Updated January 2013](#). 2013. Available at: <https://www.icsi.org/guideline/headache/>. Accessed June 13, 2019.

Kaniecki RG. [Migraine and tension-type headache: an assessment of challenges in diagnosis](#). *Neurology*. 2002;58(9 suppl 6):S15-S20.

Kuca B, Silberstein SD, Wietecha L, Berg PH, Dozier G, Lipton RB. [Lasmiditan is an effective acute treatment for migraine: A phase 3 randomized study](#). *Neurology*. 2018;91(24):e2222-e2232.

Landy S, Munjal S, Brand-Schieber E, Rapoport AM. [Efficacy and safety of DFN-11 \(sumatriptan injection, 3 mg\) in adults with episodic migraine: a multicenter, randomized, double-blind, placebo-controlled study](#). *J Headache Pain*. 2018;19(1):69.

Linsenmeyer TA. [Use of botulinum toxin in individuals with neurogenic detrusor overactivity: state of the art review](#). *J Spinal Cord Med*. 2013;36(5):402-419.

Lipton RB, Dodick D, Sadovsky R, et al. [A self-administered screener for migraine in primary care: the ID Migraine validation study](#). *Neurology*. 2003;61(3):375-382.

Lipton Richard B, Diamond Merle L, Tepper Stewart J. [Expert perspectives--migraine prevention for highly impacted patients](#). *US Neurology*. 2018;14(suppl 2):S3-S10.

MaassenVanDenBrink A, Meijer J, Villalon CM, Ferrari MD. [Wiping out CGRP: potential cardiovascular risks](#). *Trends Pharmacol Sci*. 2016;37(9):779-788.

McCulloch J, Uddman R, Kingman TA, Edvinsson L. [Calcitonin gene-related peptide: functional role in cerebrovascular regulation](#). *Proc Natl Acad Sci U S A*. 1986;83(15):5731-5735.

Moskowitz MA. [Basic mechanisms in vascular headache](#). *Neurol Clin*. 1990;8(4):801-815.

Naot D, Cornish J. [The role of peptides and receptors of the calcitonin family in the regulation of bone metabolism](#). *Bone*. 2008;43(5):813-818.

Natoli JL, Manack A, Dean B, et al. [Global prevalence of chronic migraine: a systematic review](#). *Cephalalgia*. 2010;30(5):599-609.

Oswald JC, Schuster NM. [Lasmiditan for the treatment of acute migraine: a review and potential role in clinical practice](#). *J Pain Res*. 2018;11:2221-2227.

Pietrobon D. [Migraine: new molecular mechanisms](#). *Neuroscientist*. 2005;11(4):373-386.

Raddant AC, Russo AF. [Calcitonin gene-related peptide in migraine: intersection of peripheral inflammation and central modulation](#). *Expert Rev Mol Med*. 2011;13:e36.

Schreiber CP, Hutchinson S, Webster CJ, Ames M, Richardson MS, Powers C. [Prevalence of migraine in patients with a history of self-reported or physician-diagnosed "sinus" headache](#). *Arch Intern Med*. 2004;164(16):1769-1772.

Silberstein S. [MAP0004: dihydroergotamine mesylate inhalation aerosol for acute treatment of migraine](#). *Expert Opin Pharmacother*. 2012;13(13):1961-1968.