Several Types of Headaches (HAs)

**Primary Examples**
- Migraine
- Tension type
- Cluster

**Secondary Examples**
- Infectious (Meningitis, Sinusitis)
- Space occupying lesion (abscess, mass)
- Bleeding (SAH)
- Vascular (cerebral venous thrombosis, cervical artery dissection)
- Rheumatologic (GCA)
- Ophthalmological (angle-closure glaucoma, optic neuritis)
- Neurological (trigeminal neuralgia, post-herpetic neuralgia)
- Idiopathic intracranial hypertension
- Others (acute hypertension, CO poisoning)

*Our focus today will be migraines*
Migraine Impact and Epidemiology

• One in five US adults has migraine\(^1\)
  – 28 million persons have migraine each year in the US
• Prevalence
  – Women 25% (lifetime)
  – Men 8% (lifetime)
  – ~ 70% of migraineurs have positive family history in first-degree relative
• 5–9 million PCP office visits per year in US due to migraines\(^3\)
• 5 million headache annual visits to US EDs\(^2\)
  – Ranks #5 for annual emergency department visits\(^1\)
• Associated with ~ $17 billion/year in direct and indirect healthcare costs\(^1\)


Lizzy, a 31-year-old Mother

• Asks you for help with her sinus headaches.
  She has been getting them for several years but they are occurring almost daily now.
• Predominantly frontal and maxillary in location; not throbbing.
• Takes acetaminophen almost daily, along with pseudoephedrine preparations and occasional loratadine when she has watery eyes and nasal congestion.
• What else do you need to know to help Lizzy?
• What treatments could be offered?
Differentiating Migraine from Other Types of Headache

Basics of the History and Physical Exam

Headache Screening

- Inquire about
  - Timing/frequency
  - Exacerbating factors/triggers
    - What meds have been tried
    - Use/overuse of meds
  - Location
  - Intensity
  - Nature of pain
  - Associated symptoms
    - Visual, motor, sensory, GI

- Evaluate
  - Patient walking, body language
  - Assess symmetry of CN, motor, sensory, coordination, DTRs
  - Palpate head, arteries, trigger points
  - Examine neck for stiffness and ROM
  - Perform fundoscopic exam
  - Examine oral cavity/TMJ

Diagnosis and Treatment of Headache. Bloomington, MN: Institute for Clinical Systems Improvement (ICSI); 2009.
### Episodic Migraine (EM) Recognition by ICHD Criteria

#### Migraine without Aura (1.1)

**At Least FIVE Attacks with:**

- At least 2 of the following
  - Unilateral
  - Pulsating
  - Moderate to severe pain
  - Aggravated by or avoidance of routine physical activity
- At least 1 of the following
  - Nausea and/or vomiting
  - Photo and phonophobia
- No organic disease

#### Migraine with Aura (1.2.1-6)

**At Least TWO Attacks with:**

- At least 1 fully reversible symptom without motor
  - Visual + and/or -
  - Sensory + and/or -
  - Dysphasic speech
- At least 2 of the following
  - At least one aura symptom develops gradually over $\geq 5$ min or different symptoms occur in succession over $\geq 5$ min
  - Each symptom lasts $\geq 5$ and $\leq 60$ min
- 1.1 begins with aura or in $\leq 60$ min
- No organic disease

---

### Headache Types

<table>
<thead>
<tr>
<th>Chronic Migraine (CM)</th>
<th>Medication Overuse Headache (MOH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Headache $\geq 15$ days/month AND duration $\geq 4$ hours/day $x &gt; 3$ mo</td>
<td></td>
</tr>
<tr>
<td>- Not just “more” episodic migraine!</td>
<td></td>
</tr>
<tr>
<td>- Evolves as complication of EM (2.5%/year)</td>
<td></td>
</tr>
<tr>
<td>- More disabling with higher costs</td>
<td></td>
</tr>
<tr>
<td>- Risk factors include:</td>
<td></td>
</tr>
<tr>
<td>- Comorbidities (anxiety, depression, obesity)</td>
<td></td>
</tr>
<tr>
<td>- Iatrogenic factors (medication type and frequency of use)</td>
<td></td>
</tr>
<tr>
<td>- Can be reversed; goal is revert back to episodic migraine</td>
<td></td>
</tr>
<tr>
<td>- Pharmacologically maintained HA</td>
<td></td>
</tr>
<tr>
<td>- $&gt;15$ d/mo with HA</td>
<td></td>
</tr>
<tr>
<td>- Regular acute drug use $&gt;10$ d/mo ($&gt;15$ d for simple analgesics) for $&gt;3$ mo</td>
<td></td>
</tr>
<tr>
<td>- HA worsens over time of overuse</td>
<td></td>
</tr>
<tr>
<td>- HA resolves or reverts to previous pattern within 2 mo of overuse elimination</td>
<td></td>
</tr>
<tr>
<td>- ANY abortive medication can cause medication overuse headache!!</td>
<td></td>
</tr>
</tbody>
</table>

---

Understanding the Chronology of Migraine

Physiological Phases of Migraine:
- Neurovascular Activation
- Electrical Disinhibition
- Neurochemical Disruption
- Central Sensitization

Pre-headache phase
- Premonitory Aura w/o Headache
- Mild Headache (tension-type)
- Migrainous Headache

Migraine Evolution
- Migraine Headache
- Diagnosis if Process Terminates at Different Stages

Headache Diagnosis if Process Terminates at Different Stages
- Premenstrual
- Aura w/o Headache
- Mild Headache (tension-type)
- Migrainous Headache
- Migraine

Migraine Evolution
From Episodic Attacks to Chronic Disease

Episodic Migraine
- Severe Impairment
- Moderate Impairment
- Mild Impairment
- Normal

Chronic Migraine
- Mood and anxiety disorders
- Sleep disorders
- Medication overuse

ID Migraine™ – A Validated Screener
Closing the HA Diagnosis Gap

Choose Yes or No

• When you have a HA, do you feel nauseated or sick to your stomach?
• When you have a HA, does light bother you (a lot more than when you don’t have a HA)?
• During the last 3 months, have your HAs limited your ability to work, study, or do what you needed to do?

2/3 Yes for migraine:
• Sensitivity: 0.81
• Specificity: 0.75

Positive predictive value of 93% in primary care setting


Indications for Diagnostic Testing

Red Flags
• Systemic symptoms: fever, weight loss
• Secondary risk factors: HIV, cancer
• Neurologic symptoms or signs
• Onset: new, sudden, abrupt, or split-second
• Older: especially >50 years
• Pattern change

Diagnostic testing indicated if ANY red flags are present

Green Flags
• Stable pattern >6 months
• Long-standing HA history
• Family history of similar HA
• Normal exams
• Consistently triggered by
  – Hormonal cycle
  – Specific sensory input
  – Weather changes

Diagnostic testing NOT indicated if only green flags present

If Indicated, Which Diagnostic Test?

- CT or MRI? With or without contrast?
  - Yield minimal without neurologic signs: <1% identify cause for HA
  - MRI: greater detail, more false positives
  - MRI for posterior fossa disease
  - MRI + MRA for suspected aneurysm/other vascular lesions
  - CT without contrast to R/O subarachnoid hemorrhage

- Weigh radiation exposure with CT, renal contrast concerns with CT and MRI vs potential yield of study

- CHOOSING WISELY: Don't perform neuroimaging studies in patients with stable headaches that meet criteria for migraine


Back to Lizzy

- Further history: she used to have more common migraine headaches as a teen; these changed over time to less intense, daily “sinus” type headaches
  - In 2 studies, 86-88% of patients self diagnosed as sinus headaches actually met ICHD criteria as migraine or probable migraine1,2

- Based on diary review, 94% of headaches that prompt a visit to the PCP are migraine type headaches3

- You diagnose Lizzy with migraines; the appropriate treatments you provide help reduce her headaches by >50% over next couple of months

International Conference Headache Disorders/International Headache Classification from International Headache Society (ICS)4

Key Takeaways

• If a patient self diagnoses their headache, don’t assume they’re right!!
• Migraine is the most common cause of headache that brings a patient to the doctor
• Recurring moderate to severe headache is migraine until proven otherwise
• Migraine patients can experience many different types of HAs from the same underlying mechanism
• Prompt treatment may restore normal neurologic function and prevent the evolution of EM to CM

The Many Manifestations of Migraine
And Current Approaches to Management
Ricky, a 31-year-old CPA

- Has history of very occasional migraines since his early 20s. Naproxen and/or a triptan usually provided relief
- Started new job 6 months ago, requiring him to work long hours
- Headaches have increased and now occur several days a week, especially on most weekend days for the last few months
- He is now taking an abortive medication most days a week

Headache Treatment

- Education!
- Acute (abortive)
  - Taken after attack has begun to relieve pain and disability and stop progression
- Preventive
  - Taken to reduce attack frequency, severity, and duration of attacks
- Non-pharmacologic (behavioral, neuromodulation, complementary/alternative)
Principles of Management for the Patient

• Establish realistic expectations
  – ≈50% reduction with prevention
  – ≥70% relief with acute treatment
  – There is no cure!

• Encourage patients to participate in their care
  – Keep a headache diary, identify triggers
  – Accept that some Rx side effects are inevitable
  – Optimize behavioral management
  – Acute: administer treatment early; do not use more than 2-3x/week or 9 days/month
  – Prevention: follow guidelines for drug/complementary/alternative treatments
  – Regular patient follow-up with dose/drug/combination changes as needed

Behavioral Strategies

1. Sleep – 6 to 8 hours, consistent within 1 hour to bed/rise (even weekends!)
2. Exercise – Any better than none; aerobic >> nonaerobic
3. Stress management – Biofeedback/relaxation, cognitive-behavioral, time management
4. Substance use – Taper caffeine to maximum 1-6 oz cup
   – Eliminate artificial sweeteners, decongestants, smoking
5. Eat – Fresh, non-processed, small, frequent healthy meals/snacks

Keeping a headache diary can help identify possible triggers
Acute (Abortive) Migraine Medications

**Non-specific**
- NSAIDs
- Combination analgesics
- Neuroleptics/antiemetics
- Corticosteroids

**Specific**
- Triptans
- Ergotamine/DHE

**New Formulations (FDA-approved)**
- Breath-powered intranasal sumatriptan dry powder
- New sumatriptan autoinjectors

**New Formulations (In development)**
- Microneedle array skin patches (zolmitriptan, sumatriptan)
- Orally inhaled (zolmitriptan, DHE)
- New intranasal delivery: dry powder, enhanced permeation
- Sumatriptan liquid spray
- Gepants
- 5-HT1F receptor agonist (lasmiditan)

*CHOOSING WISELY*
Don't recommend prolonged or frequent use of OTC pain meds for headache


Guidelines for Initiating Migraine Prevention Therapy

- **Goals:** reduce disability and medication overuse
- **Many migraineurs qualify for prevention, few are offered it**
- **Institute preventive strategies if:**
  - 2 attacks/mo with disability totaling >3 d/mo
    Recurring HA significantly interfering with patient’s daily routine despite acute Rx
  - Presence of uncommon migraine conditions: hemiplegic migraine, prolonged aura, migrainous infarction
  - Patient preference, cost considerations, med intolerance
  - Acute medications overused >2 d/wk, ineffective, intolerable side effects, or contraindicated
Migraine Preventive Therapies
US Classification/Level of Evidence

<table>
<thead>
<tr>
<th>Level of Evidence/Efficacy</th>
<th>Drug Class/Agent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Level A</strong></td>
<td><strong>Established Efficacy</strong></td>
</tr>
<tr>
<td><strong>Antiepileptic drugs:</strong></td>
<td>Divalproex sodium, sodium valproate, topiramate</td>
</tr>
<tr>
<td><strong>Beta blockers:</strong></td>
<td>Metoprolol, propranolol, timolol</td>
</tr>
<tr>
<td><strong>Triptans:</strong></td>
<td>Frovatriptan (for menstrual-related migraine)</td>
</tr>
<tr>
<td><strong>Angiotensin receptor blockers:</strong></td>
<td>Candesartan (studies now suggest level A efficacy)**</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Level B</strong></td>
<td><strong>Probably Effective</strong></td>
</tr>
<tr>
<td><strong>Antidepressants/SSRI/SSNRI/TCA:</strong></td>
<td>Amitriptyline, venlafaxine</td>
</tr>
<tr>
<td><strong>Beta blockers:</strong></td>
<td>Atenolol, nadolol</td>
</tr>
<tr>
<td><strong>Triptans:</strong></td>
<td>Naratriptan, zolmitriptan (for menstrual-related migraine)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Level C</strong></td>
<td><strong>Possibly Effective</strong></td>
</tr>
<tr>
<td><strong>ACE inhibitors:</strong></td>
<td>Lisinopril</td>
</tr>
<tr>
<td><strong>Beta blockers:</strong></td>
<td>Nebivolol, pindolol</td>
</tr>
<tr>
<td><strong>Alpha agonists:</strong></td>
<td>Clonidine, guanfacine</td>
</tr>
<tr>
<td><strong>Antiepileptic drugs:</strong></td>
<td>Carbamazepine</td>
</tr>
<tr>
<td><strong>Antihistamines:</strong></td>
<td>Cyproheptadine</td>
</tr>
</tbody>
</table>

Start low and go slow. Allow 2-3 months for full effect

*In >2 Class I Trials; †In 1 Class I or 2 Class II studies; ‡In 1 Class II Study
Silberstein SD et al. Neurology 2012;78:1337-1345. ** Not in original paper Not approved for migraine prevention

Treatment for Chronic Migraine
Institute Behavioral Strategies and Prevention Medications

• Specific FDA-approved medication: OnabotulinumtoxinA
  – Approved for prophylaxis of chronic migraine (≥15 headache days/month)
  – 8-9 fewer HA compared to 6-7 with placebo
  – 31 injection sites into head/neck Q 3 mo
  – Boxed warning re: possibility for spread causing weakness in distant area(s)
• OnabotulinumtoxinA blocks the presynaptic release of neurotransmitters, as an endopeptidase that interrupts the vesicle docking process

Key Takeaways

• Successful treatment of migraines includes a comprehensive approach of patient education, behavioral strategies, pharmacologic therapies and non-pharmacologic interventions

• Consider preventive medications for prolonged, severe or complicated HAs, or if abortive therapies are required more than 2x/week

Insights into Migraine Pathophysiology
Maria, a 38-year-old Female

- Migraines began when she was 14
- Currently compliant with topiramate 50 mg BID; uses a triptan as needed
- In the last 3 months, her headaches have increased from 1x/wk to 3-4 days/wk despite optimal lifestyle management and trigger avoidance; they are not always relieved despite prompt triptan use

Migraine Pathogenesis

Calcitonin Gene Related Protein (CGRP) First Identified as a Potential Mediator of Trigeminal Inflammation

- 1st discovered as a potent vasodilator
- Initially considered important in migraine because of its potential peripheral actions
  - Vasodilation
  - Neuroinflammation
- Belongs to calcitonin family (calcitonin, amylin, adrenomedullin, intermedin) in humans, α-CGRP and β-CGRP isoforms


New, Emerging and Alternative Approaches to Treating Migraine Headaches
CGRP in Migraine

- Potent vasodilator of cerebral arteries
- Released into jugular venous system during migraine
- Serum CGRP levels elevated in CM
- CGRP infusion evokes migraine
- Small-molecule **CGRP-receptor antagonists** (gepants) effectively abort migraine attacks
- Large molecule anti-CGRP and anti-CGRP-receptor monoclonal antibodies (mAbs) prevent EM and CM
  - *Because of large size, potential to cross blood brain barrier limited*
  - *mAb activity likely peripheral*


Small Molecule Approach

**CGRP-Receptor Antagonists: The Gepants**

- Development of older gepants stopped because of liver toxicity
- Newer, safer gepants in development:
  - **For acute treatment of episodic migraine**
    - BI 44370 TA (oral): effective vs placebo in phase II
    - Rimegepant: effective vs placebo in phase III
    - Ubrogepant: effective vs placebo in phase II; 5 phase III ongoing
  - **For preventive treatment of episodic migraine**
    - Atogepant vs placebo underway in phase II for migraine prevention
    - Rimegepant: phase 2 in progress
  - Gepants have NEVER failed on EFFICACY

Rimegepant – Phase III Trial for Abortive Use

Safety and tolerability comparable to placebo, including LFTs

Lipton et al, presented at AHS June 2018.

Large Molecule Approach
Four Monoclonal Antibodies to CGRP or Its Receptor Approved or in Development

<table>
<thead>
<tr>
<th></th>
<th>Erenumab</th>
<th>Eptinezumab</th>
<th>Galcanezumab</th>
<th>Fremanezumab</th>
</tr>
</thead>
<tbody>
<tr>
<td>Studied for</td>
<td>EM, CM</td>
<td>EM, CM</td>
<td>EM, CM, eCH, cCH</td>
<td>EM, CM, cCH</td>
</tr>
<tr>
<td>Dosing</td>
<td>Monthly SC</td>
<td>Q3 month IV</td>
<td>Monthly SC</td>
<td>Monthly or Q3 month SC</td>
</tr>
<tr>
<td>Target</td>
<td>CGRP receptor</td>
<td>CGRP peptide or ligand</td>
<td>CGRP peptide or ligand</td>
<td>CGRP peptide or ligand</td>
</tr>
<tr>
<td>Regulatory status</td>
<td>Approved</td>
<td>EM, CM Phase III announced (+)</td>
<td>Approved</td>
<td>Approved</td>
</tr>
</tbody>
</table>

eCH = episodic cluster headache; cCH = chronic cluster headache.
Erenumab (FDA Approved): Phase III Studies
Migraine Day Reduction vs Placebo

Erenumab phase III EM prevention (STRIVE)¹

Placebo (n = 281)
Erenumab 70 mg (n = 188) P < 0.001
Erenumab 140 mg (n = 187) P < 0.001

Primary Endpoint

Mean change from baseline in monthly migraine days

0 – 0.5 – 1.0 – 0.5 – 2.0 – 2.5 – 3.0 – 3.5 – 4.0 – 5.5 – 6.0 – 7.5

* P < 0.001


Galcanezumab (FDA Approved): Phase III Studies
Migraine Day Reduction vs Placebo at 3 Months

Galcanezumab phase III EM prevention (EVOLVE-1)¹

Placebo (n = 281)
Galcanezumab 120 mg
Galcanezumab 240 mg

*** P < 0.001 (at each month)

Galcanezumab phase III CM prevention (REGAIN)²

Placebo (n = 281)
Galcanezumab 120 mg
Galcanezumab 240 mg

** P < 0.01

Fremanezumab (FDA Approved): Phase III Studies (HALO)
Change from Baseline in Headache Days of at Least Moderate Severity (Migraine Days) at 3 Months

<table>
<thead>
<tr>
<th>Change from Baseline</th>
<th>Placebo</th>
<th>Fremanezumab 225 mg</th>
<th>Fremanezumab 675 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baseline</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 1</td>
<td>P&lt;0.0001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 2</td>
<td>P&lt;0.0001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Month 3</td>
<td>P&lt;0.0001</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= (-3.1) days
= (-5.8) days
= (-5.2) days

LS mean (± SE) change from baseline

P<0.0001

Placebo
Fremanezumab 225 mg
Fremanezumab 675 mg

Eptinezumab Phase III CM Prevention
Primary Endpoint: Reduction of Monthly Migraine Days, Weeks 1–12

61% of Eptinezumab Patients Achieved a ≥50% Reduction in Migraine Days

60% responder rates over weeks 1-12
Eptinezumab, 300mg, 61% (p<0.0001)
Eptinezumab, 100mg, 59% (p<0.0001)
Placebo 39%

PROMISE-2 CM study
New Abortives in Development: “ditans” – Serotonin$_{1F}$ Receptor Agonists

- Lasmiditan, positive in Phase III (Samurai and Spartan) studies as abortive
- Oral tablet 50-400 mg
- AEs: dizziness, drowsiness, paresthesias
- Does not constrict vessels

<table>
<thead>
<tr>
<th>PRIMARY ENDPOINT</th>
<th>100 mg (n=503)</th>
<th>200 mg (n=518)</th>
<th>Placebo (n=524)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Subjects Pain-free at 2h</td>
<td>28.2%</td>
<td>32.2% (38.8%)</td>
<td>15.3% (21.3%)</td>
</tr>
<tr>
<td>Odds ratio (95% CI)</td>
<td>2.2 (1.6 – 3.0)</td>
<td>2.6 (2.0 – 3.6)</td>
<td></td>
</tr>
<tr>
<td>p value</td>
<td>&lt; 0.001</td>
<td>&lt; 0.001</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KEY SECONDARY ENDPOINT</th>
<th>100 mg (n=469)</th>
<th>200 mg (n=481)</th>
<th>Placebo (n=488)</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Subjects MBS$^2$ Free at 2h</td>
<td>40.9%</td>
<td>40.7%</td>
<td>29.5%</td>
</tr>
<tr>
<td>Odds ratio (95% CI)</td>
<td>1.7 (1.3 – 2.2)</td>
<td>1.6 (1.3 – 2.1)</td>
<td></td>
</tr>
<tr>
<td>p value</td>
<td>p &lt; 0.001</td>
<td>p &lt; 0.001</td>
<td></td>
</tr>
</tbody>
</table>

1 Headache pain-free is as a reduction in headache severity from mild (1), moderate (2), or severe (3) at baseline to none (0) at the indicated assessment time
2 Most Bothersome Symptom (MBS) of either nausea, phonophobia or photophobia

Neurology, April 9, 2018

Key Takeaways

- New agents in development target molecules involved in migraine pathogenesis
- One such target is CGRP, a potent vasodilator of peripheral and cerebral arteries
- CGRP receptor antagonists include
  - Small molecules: gepants, taken orally for acute treatment
  - Large molecules: monoclonal antibodies (mAbs) injected monthly or quarterly for preventive treatment
- All mAbs display positive results, have quick onset, are well tolerated with low discontinuation rates
- Another class in development includes the “ditans,” serotonin$_{1F}$ receptor agonists
- None of the newer agents is associated with vasoconstriction
- As with all new agents, close vigilance is warranted
Sophie, a 55-year-old Female

- Diagnosed with episodic migraines over 20 years ago. Now has history of CAD and decided to embrace a “clean” lifestyle. She no longer wants to use naproxen and a triptan. She has begun an aerobic exercise regimen and her sleeping schedule has improved; however, she continues to experience headaches 5 times a month.

- She is asking you if there are any non-pharmacologic therapies that she could use to reduce her migraines?

Neuromodulation/Complementary and Alternative Treatments
Single-Pulse Transcranial Magnetic Stimulation (sTMS)

Approved for Acute and Preventive Treatment

Acute – N=164 (82 sham); 2 pulses 30 sec apart within 1 hour of aura onset. Primary outcome = 2 hours pain free: 39% sTMS vs 22% sham P=0.0179

ESPOUSE Prevention Study (4 pulses twice/day; 3 pulses up to 3 times for acute HA)

BL=baseline

Transcutaneous Supraorbital Neurostimulator (tSNS)

Change in HA days (NS) P=0.054
50% responder rates P=0.023

ESPOUSE Prevention Study (4 pulses twice/day; 3 pulses up to 3 times for acute HA)

BL=baseline

Non-invasive Vagal Nerve Stimulator (nVNS)

- Handheld, patient-controlled device that:
  - Preferentially activates vagal afferents, not vagal efferent pathways that cause bradycardia and bronchoconstriction\(^1,2\)
  - Inhibits rat CSD,\(^3\) central trigeminovascular, and thalamocortical pathways\(^4-6\)
- Approved in US for acute treatment of migraine as well as episodic cluster headache
- No serious AEs, minimal-risk device

CSD = cortical spreading depression.

https://gammacore.com

Investigational Device

Nerivio Migra

- Proven high efficacy, rapid pain relief
- 100% safe, no side effects, no limitations on use
- No significant AEs
- Modulates Descending Tracts in the brain
- Small, affordable
- Simple, intimate, comfortable

Allows patient to carry on with daily routine even on migraine days
Complementary and Alternative Considerations

- Riboflavin
- Magnesium
- Acupuncture
- Spinal/osteopathic manipulation
- Physical therapy
- Exercise
- Yoga
- Tai Chi
- Melatonin
- Hypnotherapy
- Cold therapy
- Massage
- Homeopathy
- Coenzyme Q10

Key Migraine Takeaways

- Recurring HA with disability is migraine until proven otherwise
- Patients should institute acute therapies as soon as possible after headache onset
- Use of acute meds >9 days/month can lead to medication overuse or transformation to chronic migraine
- Preventive treatment should be offered early to reduce adverse outcomes
- Newer modalities such as CGRP antagonists, neuromodulators and complementary options may supplement the therapeutic benefits offered by traditional therapies
Residency Connect

• In development
• Site to extend educational experience for Residents/Fellows
  – Online webcourses
  – Clinical tools and apps
  – Patient resources
• Place to make connections with colleagues
• Sign-up to be notified of the launch at: http://residencyconnect.rockpointe.com/

Updates for Migraine Management in Primary Care

Thank you for joining us today!

Please remember to complete the EVALUATION on the iPad.

Your participation will help shape future CME activities.