Migraine - a Disease Process

- Migraines are a chronic disease process similar to many other chronic medical conditions
- Migraine has a low mortality but high morbidity
- 38 million Americans suffer with migraines
  - Only 60% are treated
  - 15 million U.S. Citizens are suffering needlessly
- Migraines are widely undertreated
- Most common medical cause of temporary, total disability in the U.S.
- WHO lists migraine as one of the top 10 disabling illnesses worldwide
Migraine Prevalence

- Female Predominate Disease
- Annually 18% of US females will have migraine
  - 6% of US males will have migraine
- Chronic migraine: 8% of 38 million migraineurs
- CM puts a greater social, financial and emotional burden on patients than does EM
- CM with higher rates of disability
  - Annual medical costs 4 times higher
- CM with higher comorbidities: HTN, CAD, Lipids, COPD
Diagnosing Migraine

- International Classification of Headache Disorders (ICHD)
  - Recurrent Headaches – at least 5 lifetime attacks
  - Duration: 4 – 72 hours
  - At least two of the following:
    1. Unilateral
    2. Pulsating
    3. Moderate or severe intensity
    4. Aggravated by routine physical activity.
  - Additionally at least one symptom of nausea/vomiting, photophobia or phonophobia.
Episodic Migraine (EM)

- Less than 15 headache days a month
- Have typical migraine features
  - Photophobia
  - Phonophobia
  - Nausea and/or vomiting
  - Pulsatile
  - Made worse with Movement
- Triggered by weather, alcohol, stress, menses, others..
- Needs to meet ICHD criteria for migraine headaches
Chronic Migraine (CM)

- Fulfill the ICHD criteria for migraine headaches
  - Headache symptoms for over 3 months
  - 15 or more headache days a month
  - 8 out of 15 days must have classic migraine features
  - Migraine attacks aborted with triptan treatment – lack of adequate control
- Need to exclude Analgesic Overuse Headaches
  - Common in most CM sufferers
- Exclude Occipital Neuralgia
Progression to Chronic Migraine

- EM progresses to CM at 3% annually

Risk Factors:
- Head Injuries
- Obesity
- Sleep Apnea
- Depression
- Stressful Life Events: divorce, job or job changes
- Major Life Changes
- Controlled substance analgesic overuse
Comprehensive Treatment

- Identify what types of headaches patient has:
  - **Multiple headache disorder is common**
    - Migraines
    - “Sinus” – really migraines
    - Tension-type
    - Occipital Neuralgia
    - Analgesic Overuse
    - Cervicalgia

- Eliminate Causes
  - Stop analgesics, treat occipital neuralgia/cervicalgia
  - Educate patient about “sinus” headaches = “Unicorns”

- **Headache Diary** – important clinical tool for all CM
Comprehensive Treatment (cont.d)

- Patient Education on realistic expectations
  - They have a chronic condition
  - 3-4 months of aggressive preventative treatment needed to get headaches controlled
- “Quick Fix” Interventions
  - Wean off all analgesics and narcotics
  - Occipital nerve blocks
  - Start preventative therapy immediately
- Explain that Headache Diary is important for both the patient and you to monitor their progress
- Patient may be 50-70% better but tell you nothing has changed. Diary helps patient to recognize improvement
Comorbid Conditions

- Depression is common in migraine population
  - Start aggressive depression therapy immediately
- Blood pressure control
  - Low normal range only
- Screen for Sleep Apnea
- Obesity Counseling – dietary consultation
- Get your patient to do some type of exercise
  - Sitting is the new smoking.
- Cardiac, diabetes, lipid screening
Depression & Anxiety

- Prevalence of Neuropsychiatric Disorders is 3X Higher in Migraine Population
  - Depression - up to 50%
  - Anxiety - 30-40%
  - Other Phobias
- Common Co-morbidity in all headache patients
- Patient may not be aware of condition
- High index of suspicion in All Chronic Migraine
  - Treat with effective SSRI or SNRI
Obesity

- Obesity is a national epidemic in the U.S.
- Higher in the CM population
- Multiple Medical Complications
  - Hypertension
  - Cardiac disease
  - Hyperlipidemia
  - Sleep apnea – not a benign condition
  - Chronic Insomnia
- Get Dietary Consultation and Counseling
Sleep Apnea

- Frequently not recognized
  - Insomnia
  - Daytime Fatigue
  - Not always easy to diagnose
- Get a sleep study
- Untreated Sleep Apnea Morbidity
  - Obesity – Metabolic Syndrome
  - Diabetes
  - Hypertension
  - Hyperlipidemia
  - Cardiac disease – MI, arrhythmias
Insomnia

- Chronic insomnia is common in CM
- Sleep deprivation leads to poor health & medical disease
- Excessive daytime sleepiness
  - Increase risk for MVA
  - Risk of losing job
  - Drop out of school
- Migraine patients typically have poor sleep hygiene
  - Counsel on good sleep habits
  - Computer, TV, news, eating late
Botox for Chronic Migraine

- Botox has been demonstrated to be effective in the long term treatment of **Chronic Migraine only**
  - The only headache type approved for Botox by FDA
- No clinical evidence that Botox is effective for:
  - Episodic Migraine or High Frequency EM
  - Chronic Tension-type Headaches
  - Chronic Daily Headaches (Persistent Daily Headache)
- Need to see a $\geq 50\%$ reduction in migraines to say Botox was effective for a given patient with CM
  - Maximum benefit after 3 treatments
  - Headache diary – Check at every visit
- Placebo rate in migraine studies is about 40\%
Botox for Chronic Daily Headache

- No scientific evidence of therapeutic efficacy
- Insurance & Medicare have multiple restrictions on approval of use of Botox for CM
  - Meet ICHD criteria for *chronic migraine* headaches
  - Need adequate documentation of trial/failure of multiple *preventative agents*
    - Anticonvulsants, SSRI s, SNRI s, beta-blockers, verapamil, muscle relaxants
    - Some response to triptan therapy
- Document migraines ≥15 days with headache diary
- Failed physical therapy and “other modalities”
Many patients want Botox for their headaches

Media hype – “Botox is the treatment for headaches”

“My friend had it and it worked great.”

Insurance companies tell patients they will cover Botox

What they don’t tell patients is under what conditions

Complete failure to inform public under what criteria Botox will be paid for – “Just have your doctor call.”

“I’m entitled to Botox because my insurance told me they will cover it.”

Authorization – time-consuming, painful prior authorization

Cost: A single treatment with Botox for CM: $1250

Many do not meet necessary criteria
Botox for Chronic Migraine

- Botox may work for your CM patient
  - Typically adjunctive therapy
- Careful patient selection is important
- Meets ICHD classification for CM
- Eliminated other causes of headache
- Meets Medicare/Insurance requirements
- Response Rate: 3 out of 4 CM patients respond to BTX
- Need experienced physician giving Botox
  - Follow the published Botox Migraine Protocol
Migraine Prevention is Key

- Prevention of headache is key in all migraine & headache treatment
- Preferred therapy – antidepressants
  - Prozac, Lexapro, Celexa
  - Effexor XR, Savella
  - Amitriptyline, nortriptyline, imipramine
- Other Migraine preventatives
  - Topiramate
  - Valproic Acid
- Baclofen
Preventative Therapies

- Start at first visit
- Pick initial drug depending on co-morbidities
- Use therapeutic dosages
  - SSRI s – 40-80 mg
  - SNRI s – 75-400 mg
  - Tricyclics – up to 75 mg nightly
  - Baclofen 20-80 mg daily
  - Topiramate – 200-600 mg daily
    - Affects OCP therapy
Abortive Migraine Therapy

- Secondary concern for most migraine patients
- Therapeutic goal is 4 headache days or less a month
- Need to avoid Analgesic Overuse Headaches
- Triptans are the mainstay in acute migraine treatment
  - Tablets
  - Sumatriptan Injections
  - Onzetra Nasal System
- NSAID therapy
  - Gel cap preparations
  - Cambia – uniquely different diclofenic acid therapy
- Anti-emetic therapy
  - Tablets – Zofran, Reglan, Phenergan
  - Suppositories
    - Phenergan, Compazine
Quality of Life for Migraineurs

- Keep your patients out of the Emergency Room
  - Equip them all with **Migraine Rescue Kit**
    - Injectables
      - Sumatriptan
      - Toradol
    - Antiemetics
      - Tablets
      - Suppositories
  - **AVOID NARCOTICS ALL TOGETHER**
Future Therapies in Migraine

- No new migraine treatments have been developed in 20 years
- On the horizon –
  - **CGRP Monoclonal Antibody Therapy**
    - Treatment for both EM and CM
    - Studies are being done for Cluster Headache use
- First available: early 2018
- Stay tuned......
## Migraine Monoclonal Therapy

<table>
<thead>
<tr>
<th>TABLE 1</th>
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</thead>
<tbody>
<tr>
<td>Alder</td>
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<tr>
<td><strong>MAb</strong></td>
</tr>
<tr>
<td><strong>Type</strong></td>
</tr>
<tr>
<td><strong>Source</strong></td>
</tr>
<tr>
<td><strong>Mab Type/CGRP</strong></td>
</tr>
<tr>
<td><strong>Directed against</strong></td>
</tr>
<tr>
<td><strong>Route/Dosing</strong></td>
</tr>
<tr>
<td><strong>Indications studied</strong></td>
</tr>
</tbody>
</table>

EM = episodic migraine, HFEM = high frequency episodic migraine, CM = chronic migraine, EC = episodic cluster, CC = chronic cluster, CPTH = chronic post-traumatic headache
Summary - Chronic Migraine

- Chronic migraine contributes significantly to the burden of disease in the U.S. & worldwide
- CM is associated with multiple system disease
  - Higher morbidity
  - Higher incidence of neuropsychiatric illness
- Screen patients carefully for co-morbid conditions
- Treat aggressively
  - Do not use narcotics
- Dramatic improvement in Quality of Life of your patients
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- Sarasota Neurology, PA
  - 3501 Cattlemen Road – Suite B
  - Sarasota, FL 34232
  - 941-955-5858
- Board Certified Neurologist
- Specializing in head, neck and back pain
  - No surgery
  - No narcotics
- SarasotaNeurology.com
## Cluster Headache Therapy

### TABLE 1: CLUSTER HEADACHES

<table>
<thead>
<tr>
<th>Medication</th>
<th>American Recommendation</th>
<th>European Recommendation</th>
<th>Proportion receiving “excellent” relief</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Abortive</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen gas</td>
<td>A</td>
<td>A</td>
<td>56%</td>
</tr>
<tr>
<td>Sumatriptan sc</td>
<td>A</td>
<td>A</td>
<td>83%</td>
</tr>
<tr>
<td>Sumatriptan nasal</td>
<td>B</td>
<td>A</td>
<td>29%</td>
</tr>
<tr>
<td>Sumatriptan po</td>
<td>–</td>
<td>–</td>
<td>23%</td>
</tr>
<tr>
<td>Zolmitriptan nasal</td>
<td>A</td>
<td>A/B</td>
<td>51%</td>
</tr>
<tr>
<td>Zolmitriptan po</td>
<td>B</td>
<td>B</td>
<td>29%</td>
</tr>
<tr>
<td>Octeotide SC</td>
<td>C</td>
<td>B</td>
<td>–</td>
</tr>
<tr>
<td>Lidocaine 4-10% nasal</td>
<td>C</td>
<td>B</td>
<td>6%</td>
</tr>
<tr>
<td><strong>Bridge</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ipsilateral GONB</td>
<td>A</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Sterioids</td>
<td>U</td>
<td>A</td>
<td>50%</td>
</tr>
<tr>
<td>Ergotamine Tartrate</td>
<td>–</td>
<td>B</td>
<td>–</td>
</tr>
<tr>
<td><strong>Prophylactics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verapamil</td>
<td>C</td>
<td>A</td>
<td>48%</td>
</tr>
<tr>
<td>Lithium</td>
<td>C</td>
<td>B</td>
<td>25%</td>
</tr>
<tr>
<td>Melatonin</td>
<td>C</td>
<td>C</td>
<td>–</td>
</tr>
<tr>
<td>Topiramate</td>
<td>–</td>
<td>B</td>
<td>25%</td>
</tr>
<tr>
<td>Baclofen</td>
<td>–</td>
<td>C</td>
<td>–</td>
</tr>
</tbody>
</table>

Treatment recommendations for cluster headache based on American and European guidelines. Grade A = established as effective. Grade B = probably effective. Grade C = possibly effective. Grade U = data inadequate. GONB = Greater Occipital Nerve Block.