Clinical Protocol: Migraine

PREAMBLE

- Consider more sinister causes for headache
- Red flags
  - Change in previously existing headache (intensity, frequency, pattern)
  - Daily or continuous headache
  - Effort-related or positional headache
  - Headache associated with change of personality or mental status
  - Headache brought on by coughing, sneezing, or bending
  - Headache brought on by exercise or orgasm
  - Headaches awakening from sleep
  - Headaches that become refractory to previously effective treatment
  - Jaw pain (claudication)
  - Migraine aura that begins or persists after the headache has dissipated
  - New onset after age 50 years
  - Previous head trauma
  - Rapidly increasing headache frequency
  - Subjective numbness or tingling inconsistent with sensory aura of migraine
  - Sudden explosive onset of headache with rapid progression over seconds to minutes
  - Worsens with the Valsalva maneuver
  - Worst headache of life
- Consider medication overuse headaches in the differential
  - Associated with dose frequency rather than the absolute quantity of drug
  - Suspect in patients with 10 – 15 or more headaches per month
  - Headaches may be tension type or migraine-like
- Treatment is divided into:
  - Acute Migraine Therapy
  - Prophylactic Migraine Therapy
  - Perimenstrual Migraine Therapy
  - Perimenopausal Migraine Therapy
- Patients with ME/CFS may need to be titrated more slowly, and may not tolerate higher doses of medications
- Provide patient with information/dose adjustment handout
- It is expected that physicians would educate themselves about these drugs beyond the outline provided below

1. Patient Education

- RCT data
- Improves compliance and reduces headache activity
- Patients should keep a log/diary of headache severity, associated disability, and response to treatments
- Incorporated into multiple offerings (e.g., group, handouts, web-based resources)
- Incorporated into disease specific Group: Migraine Group
2. **Physical Activity**
   - Level A evidence
   - Incorporated into disease specific group: Migraine Group
   - Offered in group: Physical Activity Group
   - Tai-Chi and mild Yoga
     - Suggested
     - Offerings in community rather than CCDP

3. **Sleep**
   - RCT data
   - Too little or too much sleep can be a problem
   - Sleep disturbance can be a major trigger for migraines
   - See sleep protocol for details

4. **Diet**
   - RCT data
   - Most important dietary triggers are delayed or missed meals
   - Specific dietary triggers are associated in some individuals
     - In particular, reduced intake of caffeine, artificial sweeteners, and additives (such as monosodium glutamate)
   - Incorporated into disease specific group: Migraine Group
   - Topic specific “one-off” groups (one session) will also be available (e.g., Non Celiac Wheat Sensitivity)

5. **Alternative and Complimentary Therapies**
   - RCT and meta-analysis data

   5.1 **Petasites (butterbur)**
      - Level A evidence
      - Watch for GI upset and burping
      - 75 mg BID

   5.2 **Feverfew (MIG-99)**
      - Level B evidence
      - 6.25 mg TID

   5.3 **High-dose riboflavin (vitamin B2)**
      - Level B evidence
      - 400 mg daily

   5.4 **Magnesium malate**
      - Level B evidence
      - Watch for diarrhea; reduce dose as tolerated
      - 250 mg QID
5.5 Co-Q10
- Level C evidence
- 100 mg TID

5.6 Other
- Evidence under review

6. Psychological and Behavioural Therapies
- RCT data (30-50% reduction in frequency)
- Offered in disease specific group: Migraine Group
  - Led by nurse or NP (who will be dealing with meds)
  - 3 – 4 sessions
  - Others involved
    - E.g. Dietician, MD
- Other optional groups:
  - Core group
  - Relaxation group
  - Physical Activity group
  - Mindfulness group

7. Interventions

7.1 Trigger Point Injection, etc.
- Emerging evidence and expert opinion
- Maneuvers that resolve muscular trigger points, lengthen muscle contractures, and release painful scars and other connective tissue restrictions
- For example:
  - Myofascial release
  - Trigger Point Injections
  - Nerve blocks
- Currently available at:
  - Internally
  - Externally (outside referral):
    - Change Pain Clinic
    - Muscle MD

7.2 Acupuncture
- RCT data

7.3 Biofeedback/Neurofeedback
- Evidence under review
8. Medications

**ACUTE MIGRAINE THERAPY**

8.1 **NSAIDS**
- RCT and meta-analysis data
- Level B evidence
- Mild to moderate migraines
- More effective if taken at onset of headache (abortive treatment)
- Large single dose tends to work better than repetitive small doses
- Use usual cautions when prescribing NSAIDs

8.1 A **Ibuprofen**
- 400 – 800 mg
- Max 1200 mg/day

8.1 B **Naproxen sodium**
- 250 – 1000 mg
- Max 1000 mg/day

8.1 C **Diclofenac**
- 50 – 100 mg
- Max 150 mg/day

8.1 D **Combination of acetaminophen 250 mg/aspirin 250 mg/caffeine 65 mg**
- 1 – 2 tabs

8.2 **Antiemetics**
- RCT data
- Added when nausea is prominent

8.2 A **Metoclopramide**
- 10 – 40 mg Q4-6h

8.3 **Triptans**
- RCT and meta-analysis data (level A)
- First line for severe migraines
- More effective if taken at onset of headache (abortive treatment)
- Large single dose tends to work better than repetitive small doses
- Highest likelihood of consistent success was found with Rizatriptan
- Combined use of a triptan and NSAID more effective than either drug class alone
- Contraindicated in patients with:
  - Known or suspected vasospastic or ischemic vascular disorders
  - Uncontrolled hypertension
  - Rare migraine sub-types
    - Hemiplegic migraine
    - Basilar migraine
• Watch for:
  o Limb heaviness
  o Flushing
  o Paresthesia
  o Tightness in the chest, neck, or throat
  o Hypertension
• These side effects can usually be mitigated with lower dose or switching triptans
• Combination with SSRI/SNRI does not significantly increase risk for serotonin syndrome

8.3 A Rizatriptan
• Fastest onset of action
• 5 – 10 mg
• May repeat dose after 2 hrs
• Max 20 mg/day

8.3 B Zolmitriptan
• 2.5 – 5 mg
• May repeat dose after 2 hrs
• Max 10 mg/day

8.4 Opioids
• Should not be used for migraines, except as a last resort
• Use of opiates should not exceed 2 doses per week
• More frequent use may lead to medication overuse headaches

PROPHYLACTIC MIGRAINE THERAPY
• Consider in:
  o Recurrent headaches that interfere with daily routine
    ▪ Usually at least 2/month
  o Contraindication to acute therapy
  o Failure or overuse of acute therapy
  o Adverse effects from acute therapy
  o Patient preference
  o Uncommon migraine (e.g., basilar- type, hemiplegic)
• Expect a 33 – 55% reduction in frequency and a reduction in severity
• RCT and meta-analysis data
• Evidence is strongest (Level A) for propranolol, topiramate, metoprolol, and divalproex
• Level B evidence for amitriptyline, and venlafaxine
• Calcium channel blockers are no longer considered effective
• Titrated upward over a few weeks and then sustained for 4–8 weeks before benefit is realized

8.5 Propranolol
• Use usual cautions when prescribing beta-blockers
• Small doses may also benefit patients with POTS (up to 40 mg/day)
• Patients with POTS do not usually tolerate higher degree of beta blockade
8.6 Topiramate
- Also helpful for pain in FM and other conditions
- See protocol: Pain in Fibromyalgia, ME/CFS, and related disorders: Pharmacologic
- Usual dose 100 – 200 mg/day

8.7 Metoprolol
- Use usual cautions when prescribing beta-blockers
- Small doses may also benefit patients with POTS (25 mg BID)
- Patients with POTS do not usually tolerate higher degree of beta blockade
- Usual dose 100 – 200 mg/day
- 50 – 100 mg BID

8.8 Valproate
- Watch for: nausea, somnolence, weight gain, hepatitis, pancreatitis
- Monitor liver tests and CBC (neutropenia):
  - baseline, then q month x 6, then q 6 month
- Teratogenic risk
  - Should not be used in women of childbearing age
- Usual dose 500 – 1000 mg/day
8.9 Amitriptyline
- Also helpful for pain in FM and other conditions
- See protocol: Pain in Fibromyalgia, ME/CFS, and related disorders: Pharmacologic

8.10 Venlafaxine
- Also helpful for pain in FM and other conditions
- See protocol: Pain in Fibromyalgia, ME/CFS, and related disorders: Pharmacologic

8.11 Botox
- For patients with more than 15 headaches per month
- RCT data

Perimenstrual Migraine Therapy
- Can be prevented by perimenstrual (2 days before, continuing for 6 days) frovatriptan

8.12 Frovatriptan
- Level A evidence
- 2.5 mg twice daily

Perimenopausal Migraine Therapy
- For some, perimenopause brings relief of migraine intensity and frequency; for others, migraines are exacerbated during this time
- Both hormonal and non-hormonal therapy (i.e., fluoxetine and venlafaxine) are effective: RCT data and guidelines
  - See FM protocol for venlafaxine dosing and recommendations

Hormone Therapy (HT)
- HT can benefit migraines, but in some, migraines are worsened
- Before considering hormone therapy do a risk assessment
  - Smoking
  - Family and medical history
    - Deep vein thrombosis
    - Breast cancer
    - Cardiovascular disease including TIA/stroke
- Perimenopausal migraines are exacerbated by hormone fluctuations
  - HT via transdermal patch or gel delivers a more consistent dose of hormones than does oral medication, and is more effective while reducing side effects
- HT may be helpful in women who also have significant vasomotor symptoms
- Use only the lowest doses necessary to control symptoms minimize side effects

8.13 Hormone Therapy
- Refer to GP for implementation
9. Assess and Treat Coexisting Central Sensitivity Syndromes
   - Level A evidence for most of these conditions
   - May require referral out
   - Central Sensitivity Syndromes include:
     - ME/CFS
     - FM
     - IBS
     - Migraine
     - Tension Type Headaches
     - POTS (Postural Orthostatic Tachycardia Syndrome)
     - Multiple Chemical Sensitivities
     - Interstitial Cystitis
     - Pelvic Pain Syndromes
     - Irritable Larynx Syndrome
     - Restless Leg Syndrome
     - Temporomandibular Disorders
     - Myofascial Pain Syndrome
     - PTSD

10. Assess and Treat for Coexisting Anxiety and Mood Disorders
    - Level A evidence
    - Referral to psychiatrist for selected patients

Patient Resources
http://www.achenet.org/resources/patient_to_patient/
http://www.ninds.nih.gov/disorders/migraine/migraine.htm
http://www.migraine.org.uk
http://www.w-h-a.org
http://www.headaches.org/For_Professionals/Headache_Diary
http://www.ihs-headache.org