Managing migraine: Acute treatment strategies

National Neurology Resident’s Headache Course
October 31st – November 2, 2014

By: Catherine Foster
Conflicts of interest

- Tribute Pharmaceuticals: consultant
- Merck: Travel grants
Objectives

- To demonstrate an approach to educating patients regarding acute migraine treatment
- To differentiate the acute migraine therapies – specifically
  - Simple analgesics
    - NSAIDS: ASA, Ibuprofen, Naproxen sodium, Diclofenac powder
    - Acetaminophen
  - Triptans
  - Anti-emetics
- To gain an understanding of management of menstrual migraine using acute and short term prophylactic treatment.
- To recommend the appropriate management options for migraine in the emergency setting.
Case #1: Sophie

- 23 year-old female, single, student, right-handed

What else would you like to ask?
No significant past medical history. No head trauma.

Family Hx: migraine in her mother and older sister

Habits: Smokes 10 cigarettes/day, 4-5 coffees/day, no drugs, little to no physical activity

Rx: Alesse

HPI: for the last 6 months, twice a month, bifrontal or right- fronto-temporal headache, pulsating, 7-8/10, lasting 24-48 hours if untreated, associated nausea, has vomited on a few occasions, intolerant to light and sounds and has to leave school to “sleep if off” because even walking makes her headache worse
Does our patient have migraine?

- About 12 episodes
- Lasting 24-48 h if untreated
- Unilateral or bilateral
- Pulsating
- Moderate-severe intensity
- Worsens when walking
- Nausea with rare vomiting
- Photo and phonophobia
- **Episodic** (less than 15 days per month)

✔️ YES
Review: migraine criteria

A. At least 5 attacks fulfilling criteria B-D

B. Headache attacks lasting 4-72 hours (untreated or unsuccessfully treated)

C. Headache has at least two of the following characteristics:
   - Unilateral location
   - Pulsating quality
   - Moderate or severe pain intensity
   - Aggravation by or causing avoidance of routine physical activity (e.g., walking or climbing stairs)

D. During headache, at least one of the following is present:
   - Nausea and/or vomiting
   - Photophobia and phonophobia

E. Not attributed to another disorder

The International Classification of Headache Disorders, 3rd edition (beta version) 2013
How would you manage this patient?
Non-pharmacological approach

- **Trigger avoidance**
  - Diet
  - Hydration
  - Sleep
  - Exercise
  - Wearing sunglasses
  - ...

- **Addressing Psychosocial stress:**
  - Biofeedback
  - Relaxation therapy/guided imagery:
    - English: [www.dawnbuse.com](http://www.dawnbuse.com)
    - French: [www.passeportsante.net/fr/audiovideobalado/Balado.aspx](http://www.passeportsante.net/fr/audiovideobalado/Balado.aspx)
  - CBT
  - Self efficacy training?
  - ...

- **Education:**
  - English: [headachenetwork.ca](http://headachenetwork.ca)
  - French: [migrainequebec.com](http://migrainequebec.com)
  - MOH
  - Caffeine
  - Chronicity factors
  - Expectations
  - Medication profiles
  - ...

- **Allied Health:**
  - PT
  - OT
  - Massotherapy
  - Osteopathy
  - ...


Pharmacological approach
Canadian Headache Society Guideline
Acute Drug Therapy for Migraine Headache

A Peer-reviewed SUPPLEMENT to
The Canadian Journal of Neurological Sciences

Targeted review of the literature and expert opinion
developed through expert consensus groups
Goals of acute migraine therapy

- to relieve pain and the associated symptoms of migraine
  - nausea/vomiting
  - photophobia/phonophobia
- Rapidly and consistently treat, with minimal or no adverse events
- Relieve migraine-related disability so that the patient can return quickly to normal function.
General principles of treatment

- Response to a specific drug cannot be predicted
- Treating early in the migraine cycle is recommended, typically within the first hour of Sx onset
  - Ex: triptans may prevent but cannot reverse central sensitization
- Important to discuss medication overuse headache (MOH) and the importance of differentiating migraine from tension-type headache (TTH)
- An appropriate treatment strategy should be chosen

Canadian Headache Society Guideline Acute Drug Therapy for Migraine Headache, CJNS, 2013
Treatment strategies

- Stratified Care
- Step care within an attack
- Step care across attacks
- Hybrid model

Canadian Headache Society Guideline Acute Drug Therapy for Migraine Headache, CJNS, 2013
Choosing a pharmacological treatment
How would you like to treat our patient
## Non-specific analgesics/NSAIDS

<table>
<thead>
<tr>
<th>Rx</th>
<th>Dose</th>
<th>Interval Max dose 24h</th>
<th>NNT 2h HA relief</th>
<th>NNT 2h pain-free</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen</td>
<td>1000 mg</td>
<td>4-6h 4g/24h</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>ASA (tablet or effervescent)</td>
<td>975-1000 mg</td>
<td>4-6h 2.6-5.4g/24h</td>
<td>4.9</td>
<td>8.1</td>
</tr>
<tr>
<td>Ibuprofen</td>
<td>400 mg</td>
<td>4-6h 3200mg</td>
<td>3.2</td>
<td>7.2</td>
</tr>
<tr>
<td>Naproxen sodium</td>
<td>500-825 mg</td>
<td>bid 1500mg</td>
<td>7</td>
<td>15</td>
</tr>
<tr>
<td>Diclofenac potassium</td>
<td>50 mg tablet</td>
<td>tid-qid 150 mg</td>
<td>6.2</td>
<td>8.9</td>
</tr>
<tr>
<td></td>
<td>50 mg powder</td>
<td>Qd 50mg</td>
<td>4.5</td>
<td>7.1</td>
</tr>
</tbody>
</table>

Adapted from Canadian Headache Society Guidelines, 2013
Migraine-specific agents: Triptans

- Selective serotonin 5-HT$_{1B/1D}$ receptor agonists
- Good migraine relief with less side-effects than other ergot derivatives
- Currently 7 triptans available in Canada
  - Almotriptan (po)
  - Eletriptan (po)
  - Frovatriptan (po)
  - Naratriptan (po)
  - Rizatriptan (po, odt)
  - Sumatriptan (po, odt, IN, SC)
  - Zolmitriptan (po, odt, IN)
Migraine-specific agents: Triptans

- Contra-indications:
  - Ischemic disease: Coronary, cerebral, peripheral, bowel
  - Uncontrolled HTN
  - Hepatic insufficiency
  - Pregnancy/lactation
  - Migraine with brainstem aura or hemiplegic migraine
  - SSRI use (serotonin-syndrome is rare even in presence of SSRIs)

- Disadvantages:
  - Cost
  - No RCT comparing triptans

- Outcome of the meta-analysis
  - All triptans provide significant relief when compared to placebo

Canadian Headache Society Guideline Acute Drug Therapy for Migraine Headache, CJNS, 2013
**Triptans: summary table**

<table>
<thead>
<tr>
<th>Rx</th>
<th>Dose</th>
<th>Max /24h</th>
<th>T 1/2</th>
<th>NNT (2h pain-free)</th>
</tr>
</thead>
<tbody>
<tr>
<td>almotriptan</td>
<td>6.25; <strong>12.5 mg</strong> po</td>
<td>25 mg</td>
<td>3-4h</td>
<td>4.3</td>
</tr>
<tr>
<td>eletriptan</td>
<td>20 mg po</td>
<td>40 mg</td>
<td>4h</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td><strong>40 mg</strong> po</td>
<td>40 mg</td>
<td></td>
<td>4.5</td>
</tr>
<tr>
<td>frovatriptan</td>
<td>2.5 mg po</td>
<td>5 mg</td>
<td>26h</td>
<td>8.5</td>
</tr>
<tr>
<td>naratriptan</td>
<td>1; <strong>2.5 mg</strong> po</td>
<td>5 mg</td>
<td>6h</td>
<td>8.2</td>
</tr>
<tr>
<td>rizatriptan</td>
<td>5, <strong>10 mg</strong> po/odt</td>
<td>20 mg</td>
<td>2-3h</td>
<td>3.1</td>
</tr>
<tr>
<td>sumatriptan</td>
<td>25, <strong>50 mg</strong> po</td>
<td>200 mg</td>
<td>2.5h</td>
<td>6.1</td>
</tr>
<tr>
<td></td>
<td><strong>100 mg</strong> po</td>
<td>200 mg</td>
<td></td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>5 mg, <strong>20 mg</strong> IN</td>
<td>40 mg</td>
<td></td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td><strong>6 mg</strong> SC</td>
<td>12mg</td>
<td></td>
<td>2.3</td>
</tr>
<tr>
<td>zolmitriptan</td>
<td>1, <strong>2.5 mg</strong>, <strong>5mg</strong> po/odt</td>
<td>10 mg</td>
<td>3h</td>
<td>5.9</td>
</tr>
<tr>
<td></td>
<td><strong>5 mg</strong> IN</td>
<td>10mg</td>
<td></td>
<td>4.6</td>
</tr>
</tbody>
</table>

**Bold = optimal dose**

Adapted from Canadian Headache Society Guidelines, 2013
# Most common side effects

<table>
<thead>
<tr>
<th>Triptans</th>
<th>Side effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almotriptan</td>
<td>Nausea, Dizziness, Paresthesias</td>
</tr>
<tr>
<td>Eletriptan</td>
<td>Asthenia, Nausea, Dizziness, Somnolence</td>
</tr>
<tr>
<td>Frovatriptan</td>
<td>Dizziness, Fatigue, Paresthesias</td>
</tr>
<tr>
<td>Naratriptan</td>
<td>Nausea, Pain/pressure, Paresthesias</td>
</tr>
<tr>
<td>Rizatriptan</td>
<td>Dizziness, Somnolence, Nausea, Paresthesias</td>
</tr>
<tr>
<td>Sumatriptan</td>
<td>Paresthesias, Pain/pressure</td>
</tr>
<tr>
<td>Zolmitriptan</td>
<td>Dizziness, Paresthesias, Pain/pressure, Somnolence</td>
</tr>
</tbody>
</table>
1. **All triptans** are recommended.

2. If one triptan doesn’t work… try another…. Try them all

3. If response is suboptimal….add an NSAID

4. Treat EARLY. Educate patients about MOH

Adapted from:
Canadian Headache Society Guideline Acute Drug Therapy for Migraine Headache, CJNS, 2013
Our recommendations to Sophie ..

- Non-pharmacological:
  - Reduce coffee consumption 1-2 cups per days
  - Hydration
  - Good sleep habits
  - Keep a calendar until our next visit
  - Smoking cessation

- Acute Tx:
  - Naproxen sodium
  - Rizatriptan po or odt

- Follow-up 2-3 months
3 months later

- Combination naproxen sodium and the triptan usually works but doesn’t work as well when she gets peri-menstrual migraines.

- Also mentions that she had an episode where she saw zigzags on the right side and they became bigger and bigger until they disappeared after about 30 minutes.

- About 30 minutes later she developed a migraine.

- She didn’t include it in her calendar because she wasn’t sure it was important.

- Let’s take a look at her calendar …..
Legend:
T: Triptan
N: Naproxen
S: Sleep dep
P: Presentation
E: Exams
Q: quiz
## Calendar

**Legend:**
- **T:** Triptan
- **N:** Naproxen
- **S:** Sleep dep
- **P:** Presentation
- **E:** Exams
- **Q:** quiz

### Diagnoses:
- **Episodic migraine**
- **Possible menstrual related migraine (MRM)**
- **Possible migraine with aura**
**Review: Menstrual Related Migraines (MRM)?**

- **Menstrual related migraine without aura**
  
  A. Attacks in a menstruating woman, fulfilling criteria for migraine without aura and criteria B below

  B. Documented and prospectively recorded evidence over at least 3 consecutive cycles that confirm that attacks occur on Day 1 +/- 2 (i.e. Day -2 to +3) of menstruation in at least 2 of the 3 menstrual cycles and additionally at other times in the cycle

  - First day of menses = Day 1; preceding day = Day -1. There is NO day zero.
  - Menses = endometrial bleeding

- **Pure menstrual migraine without aura**
  
  A. Attacks in a menstruating woman, fulfilling criteria for migraine without aura and criteria B below

  B. Documented and prospectively recorded evidence over at least 3 consecutive cycles that confirm that attacks occur on Day 1 +/- 2 (i.e. Day -2 to +3) of menstruation in at least 2 of the 3 menstrual cycles and at NO other times in the cycle

ICHD-III beta online pdf, 2013 Cephalalgia
Migraine with aura

A. At least 2 attacks fulfilling criteria B-D

B. Aura consisting of at least one of the following, but no motor weakness:
   1. Fully reversible visual symptoms including positive features (i.e. flickering lights, spots or lines) and/or negative features (i.e., loss of vision)
   2. Fully reversible sensory symptoms including positive features (i.e. pins and needles) and/or negative features (i.e., numbness)
   3. Fully reversible dysphasic speech disturbance

C. At least two of the following:
   1. Homonymous visual symptoms and/or unilateral sensory symptoms
   2. At least one aura symptom develops gradually over ≥ 5 minutes and/or different aura symptoms occur in succession over ≥ 5 minutes
   3. Each symptom lasts ≥5 and ≤ 60 minutes

D. Headache fulfilling criteria B-D for Migraine without aura begins during or follows aura within 60 minutes

E. Not attributed to another disorder

The International Classification of Headache Disorders, 3rd edition (beta version) 2013
What counselling can we give her with respect to stroke risk?

- She is still taking COC (Alesse) because starting that medication did not coincide with beginning of her migraines
- She is still smoking
Migraine and cardiovascular disease: systematic review and meta-analysis

Markus Schürks, instructor,1,9 Pamela M Rist, doctoral student,1,2 Marcelo E Bigal, director,3,4 Julie E Buring, professor,1,2 Richard B Lipton, professor,3,5,6 Tobias Kurth, senior researcher1,2,7,8

<table>
<thead>
<tr>
<th>Category</th>
<th>RR ischemic CVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Migraine, female &lt; 45 years</td>
<td>3.65</td>
</tr>
<tr>
<td>Migraine, female &gt; 45 years</td>
<td>1.22</td>
</tr>
<tr>
<td>Migraine, female, COC</td>
<td>7.02</td>
</tr>
<tr>
<td>Migraine, female, smoker</td>
<td>9.03</td>
</tr>
<tr>
<td>MO</td>
<td>1.23</td>
</tr>
<tr>
<td>MA</td>
<td>2.16</td>
</tr>
<tr>
<td>MA, OC, Smoker</td>
<td>10</td>
</tr>
</tbody>
</table>

Schürks et al., 2009
Treating menstrual-related migraine

- **Acute treatment strategies:**
  - All triptans
  - Positive trial using almotriptan
  - Rizatriptan 10 mg + dexamethasone 4 mg > rizatriptan alone

- **Perimenstrual short-term prophylaxis (days -2 to +3 of menstrual cycle):**
  - Frovatriptan 2.5 mg qd or bid
  - Naratriptan 2.5 mg bid
  - Zolmitriptan 2.5mg bid-tid
  - Naproxen sodium + topical estrogen 1.5 mg
  - Magnesium, 360 mg, started on day 15 and continued until start of menses
  - Mefenamic acid 500 mg tid started day 1 until end of menses
  - Continuous COC’s

Adapted from:
Canadian Headache Society Guideline Acute Drug Therapy for Migraine Headache, CJNS, 2013
Any questions so far?

By: Nikki Albert
Case #2: Melanie

- 32 year old, lawyer, married, 2 children
- PMHx: no head trauma, Asthma
- Fam Hx: mother has migraines

HPI:
- Migraines started about 5 years ago, followed by family md
- Pain max within 1 hour, prominent early nausea, pulsating, R sided or bifrontal, moderate to severe, lasting 24h, 1-2x per week. Vomits rarely.
- Less response with Advil Liquigels

Ideas for acute Tx?
Choosing an acute medication

- Efficacy of the Rx
- Consider migraine features (see next slide)
- Co-existing medical/psychiatric disorders
- Patient preference
  - What is important to the patient?
    - Complete relief of head pain
    - No recurrence
    - Rapid onset of action

Canadian Headache Society Guideline Acute Drug Therapy for Migraine Headache, CJNS, 2013
Consider migraine features when choosing a Rx

<table>
<thead>
<tr>
<th>Migraine feature</th>
<th>Choice of Rx</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rapid build-up</td>
<td>Injectable formulation (Sumatriptan SC) +/- anti-emetic</td>
</tr>
<tr>
<td>Early nausea/vomiting</td>
<td>Nasal spray (slightly faster onset than oral formulations) +/- anti-emetic</td>
</tr>
<tr>
<td>Maximal upon awakening</td>
<td></td>
</tr>
<tr>
<td>Early nausea/late vomiting</td>
<td></td>
</tr>
<tr>
<td>Less nausea or nausea increased with water</td>
<td>Oral disintegrating formulations (not faster onset)</td>
</tr>
<tr>
<td>No significant nausea</td>
<td>Any formulation</td>
</tr>
<tr>
<td>Rapid build-up, no early nausea</td>
<td>Faster oral formulations (diclofenac potassium powder)</td>
</tr>
</tbody>
</table>

Adapted from: Canadian Headache Society Guideline Acute Drug Therapy for Migraine Headache, CJNS, 2013
Recommendations: Adjunctive drugs

1. **Metoclopramide (10 mg orally)** is recommended for use with acute migraine medications for migraine attacks to improve relief of nausea.

2. **Domperidone (10 mg orally)** is recommended for use with acute migraine medications for migraine attacks to improve relief of nausea.

Adapted from:
Canadian Headache Society Guideline Acute Drug Therapy for Migraine Headache, CJNS, 2013
### Treatment strategies:

#### Table 11A: Acute migraine treatment strategies and medication summary: General Strategies

<table>
<thead>
<tr>
<th>Increasing migraine severity - Refractoriness to therapy</th>
<th>Clinical Phenotype</th>
<th>Strategy</th>
<th>Medications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moderate – severe attack /NSAID failure strategies</td>
<td>Mild – moderate attack strategies</td>
<td>1.a Acetaminophen</td>
<td>Acetaminophen ± metoclopramide</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1.b NSAID</td>
<td>Ibuprofen, diclofenac potassium, naproxen sodium, ASA, all ± metoclopramide</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.a NSAID with triptan rescue</td>
<td>NSAID ± metoclopramide + a triptan later for rescue if necessary</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2.b Triptan</td>
<td>Triptan ± metoclopramide</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sumatriptan (SC injection, nasal, oral)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Zolmitriptan (nasal, oral, wafer)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rizatriptan (oral, wafer)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Naratriptan (oral)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eletriptan (oral)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Almotriptan (oral)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Frovatriptan (oral)</td>
</tr>
<tr>
<td></td>
<td>Refractory migraine strategies</td>
<td>3.a Triptan – NSAID combination</td>
<td>Triptan + NSAID taken simultaneously ± metoclopramide</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.b Triptan – NSAID combination with rescue</td>
<td>Triptan + NSAID taken simultaneously ± metoclopramide + one or more for rescue later (as necessary) of:</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Ketorolac IM</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Indomethacin (oral or rectal)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Prochlorperazine (oral or rectal)</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Chlorpromazine (oral)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Dexamethasone or prednisone</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Opioid combination analgesics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.c Dihydroergotamine</td>
<td>Dihydroergotamine (nasal or SC or IM self-injection) ± metoclopramide</td>
</tr>
</tbody>
</table>
Case #3: Call from the emergency

- 28 year-old male, doctoral student.
- Known for migraine headache for the last 5 years. No other PMH.
- Eletriptan 40 mg PRN, Ibuprofen 200-400 mg PRN
- HPI: 1-2 times per month "migraine attack", pulsating, severe headache, 8/10, predominating in the right fronto-temporal region with prominent early nausea and vomiting after 1 hour. Duration 2-3 days. Her “skin hurts” and he has prominent P/P.
- The emergency doctor was wondering if there were any new recommendations for treating migraine in the ED....
Review Article

Canadian Headache Society systematic review and recommendations on the treatment of migraine pain in emergency settings

Serena L Orr¹,², Michel Aubé³, Werner J Becker⁴, W Jeptha Davenport⁵, Esma Dilli⁶, David Dodick⁷, Rose Giammarco⁸, Jonathan Gladstone⁹, Elizabeth Leroux¹⁰, Heather Pim¹⁰, Garth Dickinson¹ and Suzanne N Christie¹

Abstract

Background: There is a considerable amount of practice variation in managing migraines in emergency settings, and evidence-based therapies are often not used first line.

Methods: A peer-reviewed search of databases (MEDLINE, Embase, CENTRAL) was carried out to identify randomized and quasi-randomized controlled trials of interventions for acute pain relief in adults presenting with migraine to emergency settings. Where possible, data were pooled into meta-analyses.

Results: Two independent reviewers screened 831 titles and abstracts for eligibility. Three independent reviewers subsequently evaluated 120 full text articles for inclusion, of which 44 were included. Individual studies were then assigned a US Preventive Services Task Force quality rating. The GRADE scheme was used to assign a level of evidence and recommendation strength for each intervention.

Interpretation: We strongly recommend the use of prochlorperazine based on a high level of evidence, lysine acetylsalicylic acid, metoclopramide and sumatriptan, based on a moderate level of evidence, and ketorolac, based on a low level of evidence. We weakly recommend the use of chlorpromazine based on a moderate level of evidence, and ergotamine, dihydroergotamine, lidocaine intranasal and meperidine, based on a low level of evidence. We found evidence to recommend strongly against the use of dexamethasone, based on a moderate level of evidence, and granisetron, haloperidol and trimethobenzamide based on a low level of evidence. Based on moderate-quality evidence, we recommend weakly against the use of acetaminophen and magnesium sulfate. Based on low-quality evidence, we recommend weakly against the use of diclofenac, droperidol, lidocaine intravenous, lysine clonixinate, morphine, propofol, sodium valproate and tramadol.

Keywords Migraine, emergency, management, headache, acute pain

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Email: sorr@cheo.on.ca
Recommended for use in acute migraine in ED or similar setting

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Recommendation</th>
<th>Level of evidence</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prochlorperazine</td>
<td>Strong</td>
<td>High</td>
<td>10 mg IV</td>
</tr>
<tr>
<td>Lysine acetylsalicylic acid*</td>
<td>Strong</td>
<td>Moderate</td>
<td>1-1.8 g IV</td>
</tr>
<tr>
<td>Metoclopramide</td>
<td>Strong</td>
<td>Moderate</td>
<td>10-20 mg IV</td>
</tr>
<tr>
<td>Sumatriptan subcutaneous</td>
<td>Strong</td>
<td>Moderate</td>
<td>6 mg SC</td>
</tr>
<tr>
<td>Ketorolac</td>
<td>Strong</td>
<td>Low</td>
<td>60 mg IM, 30 mg IV</td>
</tr>
<tr>
<td>Chlorpromazine</td>
<td>Weak</td>
<td>Moderate</td>
<td>0.1 mg/kg – 25 mg IV</td>
</tr>
<tr>
<td>Ergotamine</td>
<td>Weak</td>
<td>Low</td>
<td>0.5 mg SC</td>
</tr>
<tr>
<td>Dihydroergotamine</td>
<td>Weak</td>
<td>Low</td>
<td>1 mg SC or IM</td>
</tr>
<tr>
<td>Lidocaine intranasal</td>
<td>Weak</td>
<td>Low</td>
<td>40-80 mg IN</td>
</tr>
<tr>
<td>Meperidine</td>
<td>Weak</td>
<td>Low</td>
<td>75-100 mg IM</td>
</tr>
</tbody>
</table>

* Not currently available in Canada

Orr et al., Cephalagia, 2014
**NOT** recommended for use in acute migraine in ED or similar setting

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Recommendation</th>
<th>Level of evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dexamethasone</td>
<td>Strong</td>
<td>Moderate</td>
</tr>
<tr>
<td>Trimethobenzamide*</td>
<td>Strong</td>
<td>Moderate</td>
</tr>
<tr>
<td>Granisetron</td>
<td>Strong</td>
<td>Low</td>
</tr>
<tr>
<td>Haloperidol</td>
<td>Strong</td>
<td>Low</td>
</tr>
<tr>
<td>Acetaminophen IV*</td>
<td>Weak</td>
<td>Moderate</td>
</tr>
<tr>
<td>Magnesium sulfate</td>
<td>Weak</td>
<td>Moderate</td>
</tr>
<tr>
<td>Octreotide</td>
<td>Weak</td>
<td>Moderate</td>
</tr>
<tr>
<td>Diclofenac intramuscular</td>
<td>Weak</td>
<td>Low</td>
</tr>
<tr>
<td>Droperidol</td>
<td>Weak</td>
<td>Low</td>
</tr>
<tr>
<td>Lidocaine IV</td>
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<td>Low</td>
</tr>
<tr>
<td>Lysine clonixinate IV*</td>
<td>Weak</td>
<td>Low</td>
</tr>
<tr>
<td>Morphine</td>
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<td>Low</td>
</tr>
<tr>
<td>Propofol</td>
<td>Weak</td>
<td>Low</td>
</tr>
<tr>
<td>Tramadol</td>
<td>Weak</td>
<td>Low</td>
</tr>
</tbody>
</table>

* Not currently available in Canada

Orr et al., Cephalalgia, 2014
Quick note about: medication overuse headache (MOH)

A. Headache occurring on 15 days per month in a patient with a pre-existing headache disorder

B. Regular overuse for 3 months of one or more drugs that can be taken for acute and/or symptomatic treatment of headache

C. Not better accounted for by another ICHD-3 diagnosis
Recommendations to avoid MOH

- Limit use to a maximum of 14 days/month:
  - Acetaminophen
  - ASA
  - NSAIDs

- Limit use to a maximum of 9 days/month:
  - Triptans
  - Ergotamine
  - Opioids
  - combination analgesics

- If taking both groups of medications limit use to a maximum of 9 days/month

- Patients with frequent attacks at risk for MOH: behavioral approaches, prophylactic Rx

Canadian Headache Society Guideline Acute Drug Therapy for Migraine Headache, CJNS, 2013
Key points

- Acute migraine is a very prevalent medical condition that requires appropriate management.

- Asking our patients to use a headache diary/calendar helps us to identify migraine characteristics that can help guide our choice of treatment strategy.

- Different treatment strategies exist such as stratified care or step-wise care across attacks but perhaps a hybrid or combination of these two strategies is the most efficient.

- Non-pharmacological treatments should always be considered and triggers should be identified and avoided when possible.

- Various medications have proven to be efficient in the treatment of acute migraine mainly:
  - Analgesics/NSAIDS
  - Triptans
  - Anti-emetics
Treating early in the migraine cycle is recommended, typically within the first hour of symptom onset (Ex: triptans are rarely effective when there are already signs of central sensitization such as allodynia)

Certain type of migraines, such as menstrual-related migraine or pure menstrual migraine can be more resistant to treatment and in certain cases a mini-prophylaxis may be considered.

Based on recent recommendations from the Canadian Headache Society, prochlorperazine is the first choice of treatment of migraine in the emergency followed by lysine acetylsalicylic acid, metoclopramide and sumatriptan.

In the acute management of migraine it is important to educate patients on the possibility and signs of medication overuse headache (MOH).
Any questions?

heather_pim@yahoo.com

http://firstin.wordpress.com
REFERENCES

  - [Online access](#)

  - [Online access](#)

- Canadian Headache Society Systematic Review & Recommendations on the Treatment of Migraine Pain in Emergency Settings, *article submitted*