Diagnosis and Treatment of Headaches

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Case 1

• 32 y/o man with bifrontal HA since his 20s
• Preceded by shimmery vision x 15 min
• Can last up to 12h
• Occurs up to 1-2x/month
• Triggers: EtOH, sleep deprivation
• Photophobia, nausea
• Mother and sister with severe “sinus HA”
**IHS Criteria for Migraine**

Migraine is an episodic, recurrent headache lasting 4 to 72 hours with

- Unilateral pain
- Throbbing pain
- Pain worsened by movement
- Moderate or severe pain

**2 pain qualities:**

**1 associated symptom:**

- Nausea
- Vomiting
- Photophobia and phonophobia


**ID Migraine™**

Symptom Based and Impact Based

**ID Migraine**

1. Disability
2. Photophobia
3. Nausea

Presence of 2 out of 3 is 93% predictive of migraine.

Migraine is More Common than Asthma and Diabetes Combined

Disease Prevalence in the US Population

<table>
<thead>
<tr>
<th>Disease</th>
<th>Prevalence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rheumatoid arthritis</td>
<td>1%</td>
</tr>
<tr>
<td>Asthma</td>
<td>5%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>6%</td>
</tr>
<tr>
<td>Osteoarthritis</td>
<td>7%</td>
</tr>
<tr>
<td>Migraine</td>
<td>12%</td>
</tr>
</tbody>
</table>

Data from the CDC, US Census Bureau, and the Arthritis Foundation.

Trigger of Migraine

% of Migraine Patients with Triggers

<table>
<thead>
<tr>
<th>Trigger</th>
<th>% of Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>72%</td>
</tr>
<tr>
<td>Menstruation</td>
<td>68%</td>
</tr>
<tr>
<td>Strong Odors</td>
<td>55%</td>
</tr>
<tr>
<td>Changes in Sleep</td>
<td>52%</td>
</tr>
<tr>
<td>Weather Changes</td>
<td>46%</td>
</tr>
<tr>
<td>Skipping Meals</td>
<td>45%</td>
</tr>
<tr>
<td>Physical Exertion</td>
<td>45%</td>
</tr>
</tbody>
</table>

n = 69

Scharff et al., Headache 1995; 35:397-403
Acute Migraine Management: The Evidence-Based Guidelines

• Developed by AAFP, ACP-ASIM
  – NSAIDs as first-line therapy
  – Triptans (or DHE) indicated for those who fail to tolerate or respond to NSAIDs
  – No evidence to support the use of IV corticosteroids or intranasal lidocaine
  – Little evidence to support the use of isometheptene combinations in migraine
  – Opioids should be “reserved for use when other medications cannot be used”


Start With Highest Dose When Initiating Triptan Therapy

• Almotriptan
  – Oral 6.25, 12.5 mg
• Eletriptan
  – Oral 20, 40 mg
• Rizatriptan
  – Oral 5, 10 mg
  – ODT** 5, 10 mg
• Frovatriptan*
  – Oral 2.5 mg
• Naratriptan*
  – Oral 1, 2.5 mg
• Sumatriptan
  – RT† 25, 50, 100 mg
  – Nasal spray 5, 20 mg
  – SQ 4 mg, 6 mg
• Sumatriptan/Naproxen
• Zolmitriptan
  – Oral 2.5, 5 mg
  – ODT 2.5, 5 mg
  – Nasal spray 5 mg

**Slower acting
* ODT = orally disintegrating tablet; † RT = RT Technology™.
Screening for CV Risk Guidelines
Triptan Cardiovascular Safety Expert Panel

- Assess patients for CV risk before prescribing triptans
  - Patients with CHD or its equivalent:
    - High risk → triptans contraindicated
  - Patients with 2 or more risk factors:
    - Intermediate risk → more extensive risk evaluation required
  - Patients with 1 or no risk factors:
    - Low risk → triptans may be prescribed without extensive evaluation


Guidelines: When to Use Preventative Management

- HA significantly interferes with daily routine despite acute RX
- Acute medications contraindicated, ineffective, intolerable AEs or overused
- Frequent HA (≥2 attacks per week)
- Uncommon migraine conditions
- Cost considerations
- Patient preference

Silberstein SD et al. Wolff’s Headache. 2001
### Preventives

#### Antiepileptics
- Topiramate
- Valproate
- Gabapentin

#### Antidepressants
- TCAs
- SSRI/SNRI
- MAOIs

#### Antiserotonin
- Methysergide

#### Beta blockers

### Medicinal Herbs and Vitamins

<table>
<thead>
<tr>
<th>Agent</th>
<th>Typical dose range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnesium</td>
<td>400-800 mg/d</td>
</tr>
<tr>
<td>Riboflavin (B2)</td>
<td>400 mg/d</td>
</tr>
<tr>
<td>CoQ10</td>
<td>75 mg -150 mg bid</td>
</tr>
<tr>
<td>Butterbur <em>Petasites hybridus</em></td>
<td>50-75 mg bid</td>
</tr>
<tr>
<td>Feverfew</td>
<td>6-25 mg tid</td>
</tr>
</tbody>
</table>
Case 2 “Triptans don’t work anymore.”

- 42 year old female chronic migraineur
- Now with daily headaches
- Takes 2 extra strength ibuprofen each am with espresso chaser
- Drinks 6 cups of coffee and energy drink while at work
- Takes 2 butalbital/ASA nightly to help
- ER visits 2-3x monthly

Medication-Overuse Headache

- 4% to 5% of the general population suffer from CDH
- Up to 80% of patients consulting for headache in headache clinics suffer from CDH
- 80% of chronic migraine is MOH

**Overuse of acute medications is the most important risk factor for chronic daily headache**

- Butalbital 47%
- Acetaminophen 45%
- Opioids 31%
- ASA 24%
- Triptans 9%

**Medication-Overuse HA**

- Education
- Stop all offending medications:
  - washout period
- Start preventives
- Provide rescue therapy for severe acute HA but not to be taken more than 10 days/month
  - Valproic acid, triptans, steroids
- No prn usage of meds for mild HA during washout
- HA calendar, nutrition, exercise, sleep, PT
- Frequent followup visits- monthly during w/d then every 3 months

**Case 3 “My husband has the devil eye”**

- 28M with no prior history of HA presents with sudden onset of short bursts of pain around his left eye and temple.
- The pain consists of sharp, stabbing episodes that last a few seconds, perhaps longer, and occur up to thirty times a day.
- Left eye becomes bright red and teary.
- After six months, now has dull background of pain
- He also has tinnitus (ringing in the ear), ear pain and vertigo (dizziness).
- MRI scan and neurologic exam were normal.
# Trigeminal Autonomic Cephalgias

<table>
<thead>
<tr>
<th>Feature</th>
<th>Cluster</th>
<th>PH</th>
<th>SUNCT</th>
<th>HC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex (M:F)</td>
<td>3:1</td>
<td>1:3</td>
<td>3:1</td>
<td>1:2</td>
</tr>
<tr>
<td>Attack duration</td>
<td>60 min</td>
<td>15 min</td>
<td>5-250 s</td>
<td>mins-days</td>
</tr>
<tr>
<td>Attack frequency</td>
<td>1-3/day</td>
<td>≥ 5/day</td>
<td>1/day-30/hr</td>
<td>variable</td>
</tr>
<tr>
<td>Autonomic features</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Indocin effect</td>
<td>+/-</td>
<td>+</td>
<td>-</td>
<td>+</td>
</tr>
</tbody>
</table>

SUNCT = short-lasting unilateral neuralgiform pain with conjunctival injection and tearing syndrome; PH = paroxysmal hemicrania; HC = hemicrania continua