The Prevalence of Imploding, Exploding and Ocular Headache Types in a Women’s Health Outpatient Practice

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Introduction
Migraine headaches are a unilateral, global or bi-frontal headache with gradual onset described as pulsating and/or crescendo-decrescendo in pattern and often occur with signs and symptoms such as nausea, vomiting, photophobia, phonophobia, and an aura. They can be debilitating to those who experience them and are more prevalent among women.

Methods
Inclusion criteria
• female
• diagnosis of migraine based on the International Classification of Headache Disorders-2nd edition (ICHD-II) criteria for migraine diagnosis (headaches lasting 4-72 hours at least 5 times with at least two typical characteristics in addition to one associated symptom during the headache)

Exclusion criteria
• not fulfilling ICHD-II migraine diagnosis criteria
• inability to read English
• visual or communication impairment that would lead to inability to complete survey
• long-term maintenance opioid therapy for headache or another chronic pain condition
• patient refusal to participate

Patients were identified for participation in the study when they presented at the Women’s Health Internal Medicine Clinic (WHIM) Clinic at Mayo Clinic Arizona with a migraine or a history of migraines or, if they requested migraine medication refills via the clinic prescription nurse.

Results

Table 1: Demographics summary and menopausal status

<table>
<thead>
<tr>
<th>Age</th>
<th>Average</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>46</td>
<td>32.7+7.2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Race</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caucasian</td>
<td>179 (88.4%)</td>
</tr>
<tr>
<td>Latin American</td>
<td>5 (2.5%)</td>
</tr>
<tr>
<td>African American</td>
<td>10 (5%)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missing</td>
<td>12 (6.0%)</td>
</tr>
<tr>
<td>1: Grade 11 or Less</td>
<td>5 (2.5%)</td>
</tr>
<tr>
<td>2: Graduated High School</td>
<td>71 (35.5%)</td>
</tr>
<tr>
<td>3: Some college or technical school</td>
<td>60 (30.0%)</td>
</tr>
<tr>
<td>4: Graduated College</td>
<td>62 (31.2%)</td>
</tr>
<tr>
<td>5: Some graduate work</td>
<td>16 (8.0%)</td>
</tr>
<tr>
<td>6: Graduate degree</td>
<td>48 (24.0%)</td>
</tr>
</tbody>
</table>

Menopausal status

<table>
<thead>
<tr>
<th>Menopausal status</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menopause completed</td>
<td>65 (34.2%)</td>
</tr>
<tr>
<td>Menopause transition</td>
<td>32 (16.0%)</td>
</tr>
<tr>
<td>Postmenopause</td>
<td>59 (31.5%)</td>
</tr>
<tr>
<td>Premenopause</td>
<td>46 (24.0%)</td>
</tr>
<tr>
<td>History of menopause removed before age 50</td>
<td>21 (11.5%)</td>
</tr>
</tbody>
</table>

When comparing menopausal status with different types of headaches, the association was not statistically (p=0.2812)

No significance was noted in efficacy of common prophylactic medication based on migraine type. Medications evaluated included: amitriptyline, nortriptyline, propranolol, topiramate, divalproex sodium, gabapentin, onabotulinumtoxinA, verapamil, sumatriptan, naratriptan, almotriptan, frovatriptan, eletriptan, rizatriptan, zolmitriptan.

Concordance rate for patient responses to the pictorial migraine representation versus written questions; 54.08% (106/196), Kappa coefficient: 0.35 (i.e. weak agreement, p=0.0005).

The strengths of the study included a large sample size (n=201), evaluation in a primary care setting to evaluate actual prevalence (unlike skewed data obtained from a migraine specialty clinic), and a standardized method to survey patients. The weakness of the study includes a mostly homogenous sample with decreased generalizability to the general public.

Discussion

The study highlights the widespread prevalence of migraines in a sample of mostly Caucasian females, as hypothesized.

The response to treatment based on headache type was unrepeatably, unlike hypothesized by the authors based on results from published trials. More research needs to be done on this topic to further delineate differences among treatment options and responses of the migraine types.

The majority of the patients had not tried many of the common prophylactic medication. The barriers of which, are likely multifactorial (physician lack of knowledge/experience, patient reluctance etc.)

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References

Bajwa ZH, Wootton PJ. Evaluation of Headaches in Adults [Internet]. Up to Date. [updated 2009 July 10; cited 2010 February 11]. Available from: http://www.uptodate.com/online/content/topic.do?topicKey=headache/5074
