Chiropractic clinical reasoning in a patient with migraine headaches

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Introduction

This poster presents the successful evidence-based diagnosis and management of a patient with migraine headaches in a chiropractic setting.

Migraine headaches are 19th worldwide among diseases causing disability. [1]
Prevalence of migraine is estimated at 15% in women and 6% in men, peaking at 40 years of age. [2]

Clinical features of migraine:

- Episodic, often unilateral pulsating headache that may be associated with a prodrome or "aura"; described as blurred or spotty vision, light and sound sensitivity and/or nausea/vomiting. [1]
- Triggered by stress, schedule changes, some foods like chocolate, cheese and wine. [3]
- Presence of nausea, light and sound sensitivity and pain worsening with activity have been shown to increase the likelihood of a correct diagnosis. [2]

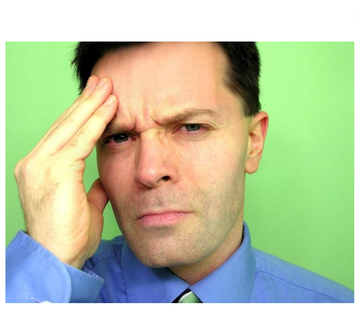
Currently there are no specific examination or imaging findings to help diagnose migraine headaches.

It is diagnosed by **excluding serious secondary headaches** from other sources and **recognizing migraine's stereotypical clinical presentation.**

Common Features

The following are *commonly found* in migraine sufferers:[3]

- 75% report *associated neck pain*
- 70% of migraine sufferers have a *family history* (1.9 fold increased risk of migraine without aura if found in 1st degree relatives)
- 50% report *known triggers* (such as a change in weather, stress, lack of sleep/fatigue, alcohol or food)
- 46% report *tearing or nasal congestion*



Diagnostic Criteria:

History of at least 5 attacks lasting 4-72 hours with **at least 2 of the following 4**:

1. Unilateral location (59%)
2. Pulsating quality (85%)
3. Disabling intensity of headache
4. Aggravated by or causing avoidance of routine physical activities

And at least 1 of the following 2:

1. Associated nausea (73%) and vomiting
2. Light sensitivity (80%) and sound sensitivity(76%). [1]

Patient's History

31 year old male presented to the UBCC Clinic with a chief complaint of chronic "migraine headache".
Onset circa 2010 with no inciting incident or traumatic event.

HA progressively worsening from a frequency of 1 headache per month to 1 per week.

HA described as *pulsating pressure* behind the eyes and *tightness in the neck* accompanied by an exacerbating *light sensitivity.*

Relief reported with sleep and rest.
He denied any temporal pattern, known trigger, dizziness, double vision, or trouble speaking. No difficulty swallowing, no drop attacks, numbness or radiation of pain into the upper extremity, face or jaw. He denied nausea or vomiting.

Previous treatment included nutritional recommendations by a Naturopathic Doctor to increase intake of *magnesium rich foods, which he believed to be beneficial*.

Pertinent medical history includes a concussion after an MVA in 2013 with no known sequelae or a change in migraine pattern.

Sleep disturbances reported by patient; he stops breathing during sleep which will frequently awaken him.

Patient's mother also reportedly suffers from migraine as well.

Physical Examination

First goal is to rule out serious causes such as masses, vision disorders and/or vascular events.

Exam procedures included:

- Cerebral, cerebellar, peripheral and cranial nerve testing: no abnormalities
- Eyes, Ears, Nose, Throat: no abnormalities
- Heart/Circulatory: No abnormalities detected
- Orthopedic/provocative testing: Cervical compression and distraction both pain free. Valsalva negative for pain. Gross active and passive cervical range of motion was full and pain free in all directions.

Chiropractic analysis:

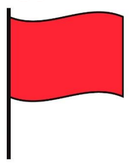
- *Tender trigger points noted in the bilateral suboccipital and bilateral upper trapezius muscles*
- *Pain reported upon provocative palpation of C1/2 right sided facets when brought into left rotation.*
- These reproduced the patient's headache symptoms.

Outcome Assessment tools:

Headache Disability Index (HDI)
Baseline score of 60% (disabling headaches)

Diagnostic Reasoning [4]

1. We first **ruled out serious pathology** through history and examination.
   - *No "red flags" from history and no neurological abnormalities.*



2. The second step was to **determine which structures may be contributing to symptoms.**
   - *Cervical spine and associated muscle palpation provoked symptoms.*

3. The final step was to **determine if any other factors may be contributing to the perpetuation of symptoms.**
   - *Fatigue, stress and nutritional deficiencies may be implicated here*.

Treatment / Management

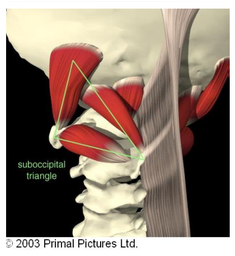
Current evidence gives the following practice recommendations: [5]

1. **Spinal manipulation** for patients with episodic or chronic migraine with or without aura. Treatment frequency 1-2 times/week for 8 weeks (moderate level of evidence)
2. **Weekly massage therapy** for reducing intensity and frequency (moderate level of evidence)
3. **Multimodal multidisciplinary care: exercise, relaxation, stress and nutritional counseling** (moderate level of evidence)

Our treatment included:

Spinal manipulation of cervical spine

Post-isometric and trigger point pressure release of suboccipital and upper trapezius mm.



Magnesium (400 mg/day)

Results: Patient was seen 1x/week for four weeks. **He reported no migraine headaches after the 1st treatment.**
By 5th visit he stated he was able to return to the gym and workout 5x/week now that the migraines have *ceased.*

HDI final score of 0% (100% improvement)!

References

1. Moloney MF, Johnson CJ. Migraine headaches: diagnosis and management. J Midwifery Womens Health 2011;56:282-92.
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4. Murphy DR, Hurwitz EL. Application of a diagnosis-based clinical decision guide in patients with neck pain. Chiropr Man Therap. 2011;19(1):19.
5. Bryans R et al. Evidence-based guidelines for the chiropractic treatment of adults with headache. J Manipulative Physiol Ther. 2011;34(5):274-89.