Vestibular Migraine

What is a Vestibular Migraine?

- A transient, recurring neurological condition that occurs when a certain threshold has been reached (i.e. too much of one trigger or a combination of triggers). When this threshold has been breached there is a temporary change in how the brain functions (i.e. neural firing & neurogenic inflammation), resulting in the signs and symptoms outlined below.
- It is not a migraine headache, plus dizziness/vertigo, but rather a specific type of migraine where dizziness/vertigo are the main symptoms that affect one's quality of life. With some, there may be no associated headaches at all.

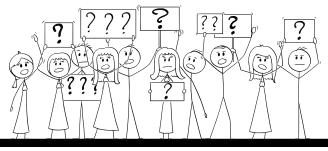
How Do Vestibular Migraines Present?

- *Symptoms*: Dizziness/vertigo that seem to occur spontaneously (usually due to an unidentified trigger) or with any of the triggers outlined on the next page. If there are headaches they may not occur at the same time as the dizziness/vertigo. Other symptoms may include: fluctuating hearing loss, ear ringing and pressure, light sensitivity, noise sensitivity, sinus pressure, nausea, confusion, visual disturbances, and numbness.
- *Signs*: The physical exam may be normal, or there could be non-progressive hearing loss, and/or atypical oculomotor findings (eye movement).
- These signs & symptoms can occur daily, monthly, or years apart.

Who Does It Affect?

Vestibular migraines can be a lifelong problem, affecting females significantly more than males (6 to 1) and approximately 3% of the general population. They often start in childhood, disappear, then reappear throughout an individual's life. Most vestibular migraine sufferers tend to have headaches early in life, but as they go through menopause, the headaches improve, but dizziness/vertigo starts to manifest. There is also a familial predisposition and it is often associated with other vestibular conditions.

(Beh, 2021, Bhattacharyya 2017, Oh 2001 & Cha 2008)



How is a Vestibular Migraine Diagnosed?

At present there are no easily available imaging (i.e. MRI, CT) or lab tests that help rule in or out vestibular migraines. At present it is diagnosed based on a history that includes:

1. At least 5 episodes with vestibular symptoms of moderate or severe intensity, lasting 5 minutes to 72 hours.
2. Current or previous history of migraine with or without aura according to the International Classification of Headache Disorders (ICHD- 3).
3. One or more migraine features with at least 50% of the vestibular episodes :
    - Headache with at least 2 of the following: 1 sided location, pulsating quality, moderate or severe pain, aggravation by routine physical activity.
    - Light and noise sensitivity.
    - Visual aura.
4. Not better accounted for by another vestibular or ICHD diagnosis. (Lempert 2022)

How are Vestibular Migraines Treated?

- Trigger identification and avoidance (refer to triggers on the next page).
- Endorphin release through regular moderate exercise, music, comedy, etc.
- Sleep hygiene.
- Self talk and visualization.
- Address any neck and jaw issues through education on proper posture, exercise prescription, manual therapy, needling (dry needling, acupuncture).
- Pharmacological intervention (prophylaxis and/or abortive).
- Between episodes address any motion sensitivity and impaired balance.
- Review of home & office set up, micro breaks at work, and 20/20/20 principle.
- Blue light blocking glasses.
- Supplements like Magnesium.
- Vagal and trigeminal stimulation.
- Botox.
- Counselling.
- Ruling out other causes of symptoms and addressing comorbidity.

Given the above and the fact that not everyone responds the same, patience and a multidisciplinary approach are vital.

Vestibular Migraine Triggers

- Too much of one thing, or exposure to a combination of factors that may include.
  - Hormonal fluctuations.
  - Stress.
  - Poor sleep.
  - Dehydration.
  - Bright lights.
  - Loud sounds.
  - Odours.
  - Weather changes.
  - Painful stimuli.
  - Excessive motion of one's self or of the environment around them.
  - Side effect of medications.
  - Nicotine.
  - Diet such as (but not limited to):
    - Aged or ripened cheeses (examples: Cheddar, Brie, Gouda, Parmesan, feta, bleu,)
    - Foods containing large amounts of salt and/or monosodium glutamate (MSG).
    - Caffeine (i.e. tea, coffee, cola, chocolate, energy drinks).
    - Smoked, cured, or processed meats such as bacon, sausage, ham, salami, pepperoni, pickled herring, bologna, chicken livers, and hot dogs.
    - Food prepared with meat tenderizer, soy sauce, vinegar, or yeast extract; and food being fermented, pickled, or marinated.
    - Pea pods and pods of broad beans such as lima and navy beans.
    - Onions, olives, pickles.
    - Alcohol (especially red wine, port, sherry, Scotch, gin, bourbon).
    - Sour cream, yogurt, buttermilk.
    - Hot fresh bread, raised coffee cake, doughnuts.
    - Excessive aspartame.
    - Nuts, peanut butter.
    - Certain fruits, including figs, avocados, raisins, red plums, passion fruit, papaya, banana, and citrus fruit.

Notes:

- Vestibular symptoms refers to: spontaneous, positional, visually induced, head motion induced vertigo as well as head motion induced dizziness with nausea
- Moderate symptoms interfere, but do do not prohibit daily activities. Severe activities prohibit daily activities.
- Duration of episodes is highly variable: About 30% of patients have episodes lasting minutes, 30% have attacks for hours and another 30% have attacks over several days. The remaining 10% have attacks lasting seconds only, which tend to occur repeatedly during head motion, visual stimulation, or after changes of head position. In these patients, episode duration is defined as the total period during which short attacks recur. At the other end of the spectrum, there are patients who may take four weeks to fully recover from an episode. However, the core episode rarely exceeds 72 hours.
- Transient auditory symptoms, nausea, vomiting, prostration, unsteadiness and susceptibility to motion sickness may be associated with vestibular migraine. However, as they also occur with various other vestibular disorders they are not included as diagnostic criteria. (Lempert 2022)

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