Vestibular Migraine (VM)

Dizziness due to migraine is quite common – it is second only to BPPV as a cause of vertigo and is 20 times more common than Méniere's disease. The diagnosis is based on the patient's story, as there are no clinical findings except when the patient is having an attack, and there is no blood test or scans that can make the diagnosis.

Only in about 1/5th of patients first experience is there visual abnormalities e.g., visual complaints such as zig zagging lines or flashing lights, kaleidoscope of colours, scotoma (a blind spot in your vision which depending on its size and severity, may look like a dark or blurry spot) or numbness and tingling of parts of the body or difficulty speaking/swallowing which last 5-60 min and then resolves

The type of dizziness in an attack is very varied, from vertigo to unsteady on walking to a constant swaying sensation.

The recurrent dizziness can last from a few seconds to days but is typically between 5 minutes and 3 days.

Visual experiences such as being on bridges, driving a car, empty rooms, long corridors, large crowds of people in a store or restaurant cinema, television & computers, flashing lights, are worse during an attack but are experienced even when an attack is not happening. This may be a PPPD response to the vestibular migraine.

During an attack most patients experience nausea, and over half experience unpleasant sensitivity to sound and light and/or one-sided pulsing headaches with a desire to lie down in a darkened room.

In about a 1/3rd of patients fluctuating ringing ("tinnitus") with hearing loss and aural fulness also being reported. The auditory symptoms are usually bilateral but unilateral symptoms and measured transient hearing loss does occur.

Attacks may be triggered by the head being in a certain position suggestive of "BPPV" or rapid turning of the head or foods (dark chocolate, red wine, cheese) or periods, stress, lack of sleep (and oversleeping), GTN, histamine, ranitidine, HRT, oral contraceptive, caffeine, exercise, computer screen, movies and flashing lights.

Between attacks patients describe motion sickness and dislike of strong or flashing light or loud sounds.

Often the patient has a history of migraine headaches “Migraine Cephalgia” (or family history of migraine), motion intolerance and a childhood history of not being able to read in the back of a car or car sick.

Vestibular migraine is associated with Méniere’s Disease, benign positional paroxysmal vertigo or persistent Postural-Perceptual Dizziness (PPPD) so the diagnosis can be quite complicated.

However, the diagnosis can be made difficult in those patients with dizziness replacing the classical headaches of migraine or occur independently of migraine headaches. In these atypical cases the migraine origin is suggested by a history of migraine, either in the patient or their family, motion sickness, irritability to light and sound during a dizzy attack and nausea.

Examination

There are no abnormal findings except during an attack. The diagnosis may be suggested by the combination of the symptom of BPPV in bilateral/all positions and the lack of a Dix Hallpike induced BPPV like nystagmus sign.

Investigations & Diagnosis

Be relatively confident of the diagnosis the patient should have had at least five episodes.

Treatment in Adults

Overview

Headache dominated migraine with only minor dizziness should be treated by a neurologist with an interest in migraine.

Vertigo dominated migraine with minor headaches should be treated by an ENT doctor.

The Treatment of the Headache – Migraine Cephalgia:

The migraine headache can be treated with an escalation of the following medicine, (depending on response) however the vertigo symptom is less responsive to medications.
It is important to treat the onset of the headache as soon as possible as delay in taking medication reduces its effectiveness.

1st Line Treatment
Single dose Aspirin* 600-900mg tablets + Domperidone** 10mg
https://bnf.nice.org.uk/drug/aspirin.html
https://bnf.nice.org.uk/drug/domperidone.html

Or

Single dose Ibuprofen* 400-600mg tablets + Domperidone** 10mg
https://bnf.nice.org.uk/drug/ibuprofen.html

* aspirin and ibuprofen should not be used in patients with asthma, peptic ulcers and kidney problems.
**Domperidone should not be used in patients with heart problems.

2nd Line Treatment
Single dose Sumatriptan 50mg is reasonable first choice.
The type of triptan and mode of administration (oral, melt, intranasal, subcutaneous will depend on nature of migraine (i.e how quickly the pain reaches peak intensity, duration, recurrence, presence of nausea etc). If you are not too nauseated, then tablets are best.
https://bnf.nice.org.uk/drug/sumatriptan.html

It should be combined with domperidone 10mg to reduce the nausea and improve gastric function.

The Treatment of Vestibular Migraine where dizziness is the main problem:
The treatment of the acute vertigo and nausea of VM is difficult. The standard acute migraine régime is followed but has limited success with the dizziness.

Triggers
If possible, the patient should try to avoid triggers such as dietary (caffeine, cheese, Chinese food, chianti, chocolate and citrus fruits), poor sleep, lack of exercise, stress, anxiety and depression. Medication such as GTN, Histamine and Ranitidine have been implicated. If triggers are eliminated or at least managed, then medication is likely to be more successful. Switching to a progesterone only

contraceptive pill in patients where an oestrogen containing contraceptive pill is implicated should be considered. HRT can have a negative effect.

Preventative Diet, Supplements and Medication

This is needed for patients that have vertigo dominated migraine attacks that are causing frequent disability (for example, two or more attacks per month that last for 3 days or more)

Diet & Supplements

All patients should be offered migraine nutraceuticals. These include Riboflavin 400mg per day, Magnesium dicitrate 600mg per day, and Coenzyme Q10 3x100mg per day. Whilst all three can take all together, I encouraged trying one for 2-3 months to evaluate the benefit, and then either stop it or add in another if more benefit is required, and to repeat this process if a third supplement is needed.

Medication

Propranolol*** 10mg bd escalating gradually to 240-320mg day . It is especially useful in the anxious patient. Please note it can be associated with weight gain.
*** propranolol should not be used in patients with asthma, heart and diabetes problems.

OR

Nortriptyline 10mg o.d then 25mg o.d increasing to 50 mg (75 mg for males) by 3 weeks. It is particularly useful in patients who do not sleep well.
The main side effect is a dry mouth and palpitations, but weight gain and sedation are less than amitriptyline. It is precluded in pregnancy.
https://bnf.nice.org.uk/drug/nortriptyline.html

OR

Topiramate 25mg od increasing to 25mg bd after 2-4 weeks, then increasing in 25mg steps to 50mg bd then up to 100mg bd. Patient should ensure that they remain well hydrated.

Possible side-effects of this medication that should be mentioned are weight loss, the needles in your hands and feet, kidney stones, a feeling of slight fogginess of your thinking and possibly even slurred speech. It is also associated with low mood.

In particular women and girls of childbearing potential need to be advised that topiramate is associated with a risk of fetal malformations and can impair the effectiveness of hormonal contraceptives.
https://bnf.nice.org.uk/drug/topiramate.html

Other therapies

There may be a role for vestibular therapy, CBD, acupuncture, and greater occipital nerve blocks especially in patients with problems taking medication or pregnancy.

Further Help

The migraine trust website (https://www.migrainetrust.org/).

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