

Neurally mediated hypotension: is also known as: the fainting reflex, neurocardiogenic syncope, vasodepressor syncope, the vaso-vagal reflex, and autonomic dysfunction. (Hypotension= low blood pressure, syncope= fainting.)

NMH happens when there is an abnormal reflex interaction between the heart and the brain, although both are structurally normal.

NMH typically occurs in susceptible individuals in the following situations:

- after prolonged periods of quiet upright posture (such as standing in a queue, standing in a shower, or even sitting for long periods),
- after being in a warm environment (such as in hot summer weather, a hot crowded room, a hot shower/ bath),
- immediately after exercise
- after emotionally stressful events
- after eating, when blood flow has shifted to the gut during the process of digestion.

Researchers at the Johns Hopkins Institute have found that NMH can cause chronic fatigue, muscle aches (or fibromyalgia), headaches, and mental confusion (difficulty concentrating, paying attention, or finding the right words, being in a 'mental fog').

These symptoms occur because blood pressure is not being properly regulated. NMH can occur in people with relatively high resting blood pressure as well as those with low resting blood pressure.

The condition can be diagnosed using a tilt table test, which assesses the blood pressure at different angles of tilt.

Various strategies can be used to improve the situation. In some individuals, a simple strategy of increasing salt intake may suffice, in others, medication can be helpful. However, if NMH is secondary to neck problems, then the cause should be examined first.

Another American doctor, Dr. Milhorat of the State University of New York, reported in 1999 on his experience with Chiari malformation, a congenital abnormality which allows part of the brain (the cerebellar tonsils) to herniate down through the foramen magnum, usually intermittently. This brings on certain symptoms.

Dr. Milhorat found that of 364 patients with Chiari, 60% had a prior diagnosis of fibromyalgia, 12% of chronic fatigue syndrome, 31% migraine, 9% multiple sclerosis and 63% psychiatric or malingering (some people had more than one diagnosis).

Symptoms of Chiari:

In 2001, Sperling et al conducted a review, which found that patients with Chiari experienced headache (80%), episodes of sensation of 'fullness' in the ear (81%), tinnitus (81%), vertigo (69%) fluctuating hearing (56%).

These symptoms are similar to those seen in a condition called Meniere's disease.

Other symptoms suggestive of Chiari include posterior headaches, dizziness and unsteady gait, fainting with a cough, and weakness or numbness.

A Chicago neurosurgeon, Dr. Heffez, in an interview with the CFIDS Association of America, explained his experience with 77 patients with CFS (CFIDS) or fibromyalgia (FMS).

He said that 66 of them had cervical stenosis and 55 had Chiari (which means that 28 had both).

In general, the patients had experienced their symptoms for an average of 7 years before seeing Dr. Heffez, and had already consulted a variety of specialists, none of whom had identified this problem.

71% had experienced some sort of minor trauma such as a car accident or head injury that appeared to have triggered the onset of the symptoms.

When the neck is hyper extended backward, the spinal canal narrows. This happens in situations such as whiplash from a car accident, extended dental treatment, coughing severely, or anything that requires looking upwards for a length of time.

For this reason, Dr. Heffez recommended that his patients refrain from any exercise that requires repetitive neck movements and to lie down for 10-15 minutes upon onset of symptoms in order to prevent them from progressing.

Symptoms suggestive of cervical spinal cord compression may include:

- Headache in the back of the head, possibly radiating to behind the eyes and into the neck and shoulders
- Painful eye movements, vision changes
- Dizziness, especially on standing up; NMH (see below)
- Muscle weakness
- Unsteady gait
- Cold, numbness and tingling in extremities
- Chronic fatigue
- Tinnitus
- Vertigo
- Sleep apnoea
- Speech impairment
- Hearing loss
- Gastrointestinal problems, irritable bowel syndrome
- Frequent urination
- Difficulty swallowing
- Symptoms made worse by exertion and especially by leaning backward or coughing.

Obviously, some of these are non-specific symptoms and may overlap with symptoms we generally tend to ascribe to arachnoiditis.

Some people may have diagnosed cervical (neck) problems, whether mechanical (disc prolapse, bone spurs, degenerative changes etc.) or due to arachnoiditis, and may experience similar symptoms, alongside pins and needles, pain and/or weakness in the arms and hands.

It can thus be difficult to assess the source of generalized problems, of which fatigue may be a prominent feature.

How do we know if Chiari or cervical stenosis are factors?

In order to find out if Chiari malformation is the cause of this type of symptom: the definitive method of diagnosis is with a T1 MRI scan of the posterior fossa, which documents the typical downward herniation of the cerebellar tonsils.

A displacement of greater than 5 mm below the foramen magnum is considered significant.

Cervical stenosis can be diagnosed with plain X-rays of the cervical spine, which show osteophytes at the involved level, loss of disc height, and often a narrow spinal canal. Note: some degree of degenerative change is seen in 25-50% of the population over the age of 50 years, and in 75% of people over 75 years, but most people do not develop symptoms from these changes.

MRI scans are helpful in detecting soft tissue abnormalities and are thus used to detect compression of spinal cord and nerve roots.

The degree to which symptoms are attributable to abnormalities detected on X-ray or MRI can only be determined using careful clinical assessment.

CONCLUSION:

Fatigue is not always regarded as a priority symptom in chronic illness but it can impact on every aspect of daily life. Not only can it be caused by the illness, but also in turn it can magnify the symptoms we experience.

It may seem an 'inconvenience' to those who haven't had first hand experience of it, but the reality is that it can seriously reduce our quality of life. Some people regard it as the most disabling of all their symptoms.