Vertigo

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Vertigo is a sensation of moving or spinning of a person or environment around him. It is a symptom, rather than a condition itself. This feeling may be barely noticeable, or it may be so severe that one finds it difficult to keep the balance and to do everyday tasks. The episode of vertigo can develop suddenly and last for few seconds to much longer. In severe vertigo, symptoms may be constant and last for several days, making normal life very difficult.

Vertigo has been noted with increased frequency in our set up. Since it is commonly caused by problem with the way balance works in the inner ear, although it can also be caused by problems in certain parts of the brain. There are two types of vertigo, known as peripheral and central, depending on the cause[1].The vestibular system includes the parts of the inner ear and brain that are involved with controlling balance and eye movements. Any damage to these can lead to Vertigo. Besides the spinning sensation, imbalance, unsteadiness, disorientation and nausea and vomiting may also be symptoms that accompany vertigo. The most common causes of peripheral vertigo include: benign paroxysmal positional vertigo (BPPV), head injury, labyrinthitis, vestibularneuronitis, Ménière's disease and taking certain types of medication.

BPPV can occur during specific head movements, while standing up or bending over, crossing the road, or turning in bed. BPPV involves short, intense, recurrent attacks of vertigo (usually lasting a few seconds to a few minutes). It is often accompanied by nausea, although vomiting is rare. BPPV is thought to be caused by small fragments of debris (calcium carbonate crystals), which break off from the lining of the channels in your inner ear[2].

Labyrinthitis is an inner ear infection that causes a structure deep inside your ear (the labyrinth) to become inflamed. When the labyrinth becomes inflamed, the information it sends to your brain is different from the information sent from your unaffected ear and your eyes. These conflicting signals cause vertigo and dizziness.

Vestibular neuronitis, also known as vestibular neuritis, is an inner ear condition that causes inflammation of the nerve connecting the labyrinth to the brain. The condition is usually caused by a viral infection. It usually lasts a few hours or days, but it may take three to six weeks to settle completely[3].

Severe vertigo is sometimes caused by a rare condition that affects the inner ear, called Ménière's disease. This can cause vertigo, as well as hearing loss, tinnitus and aural fullness .The cause is unknown[4].

Central vertigo is caused by problems in part of your brain. Causes of central vertigo include, migraines ,multiple sclerosis ,acoustic neuroma ,a brain tumour in the cerebellum, a transient ischaemic attack (TIA) or a stroke.

The evaluation of vertigo consists primarily of a medical history and physical examination[1]. Your physician may asses your hearing by Tuning fork tests or may do audiometry. Sometimes used to check for signs of nystagmus in more detail via Videonystagmography (VNG) .During this test, special goggles are placed over your eyes and you'll be asked to look at various still and moving targets. The goggles are fitted with a video camera to record the movements of your eyes. In caloric test involves running warm or cool water or air into your ear for about 30 seconds. The change in temperature stimulates the balance organ in the ear, allowing the specialist to check how well it's working. In posturography a machine to test your balance may be used to give valuable information about how you are using your vision, proprioception (sensations from your feet and joints) and the input from your ear to maintain balance. In some cases, a scan of your head may be used to look for the cause of your vertigo, such as an acoustic neuroma. Usually, either a magnetic resonance imaging (MRI) scan or a computerized tomography (CT) scan is used.

Treatment for vertigo depends on the cause. In many cases, vertigo goes away without any treatment. This is because your brain is able to

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adapt, at least in part, to the inner ear changes, relying on other mechanisms to maintain balance. For some, treatment is needed. A wide variety of medications are used to treat vertigo and the frequently concurrent nausea and emesis[1].

Vestibular rehabilitation exercises commonly are included in the treatment. These exercises train the brain to use alternative visual and proprioceptive clues to maintain balance and gait. It is necessary for a patient to re-experience vertigo so that the brain can adapt to a new baseline of vestibular function.

The most well-known of these treatments is the Epley maneuver or canalith repositioning procedure. During this treatment, specific head movements lead to movement of the loose crystals within the inner ear. By repositioning these crystals, they cause less irritation to the inner ear and symptoms can resolve[5].

In BPPV medications generally are not recommended .The vertigo improves with head rotation maneuvers that displace free-moving calcium deposits back to the vestibule. Maneuvers include the canalith repositioning procedure or Epley maneuver and the modified Epley maneuver.

In vestibular labyrinthitis and neuronitis treatment focuses on symptom relief using vestibular suppressant medications, followed by vestibular exercises.

In Meniere disease the treatment lowers endolymphatic pressure. Although a low-salt diet (less than 1 to 2 g of salt per day) and diuretics often reduce the vertigo, these measures are less effective in treating hearing loss and tinnitus. In rare cases, surgical intervention, such as decompression with an endolymphatic shunt or cochleosacculotomy, may be required when Ménière's disease is resistant to treatment with diet and diuretics. Ablation of the vestibular hair cells with intra tympanic injection of gentamicin also may be effective. Surgery usually is reserved for patients with severe, refractory Ménière's disease.

It is a common mistake to dismiss symptoms of vertigo as mere headache. However, persistent vertigo that does not improve with time or repeated episodes of vertigo should not be ignored and must be evaluated by a doctor.

References

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