

Types and Diagnosis of Vestibular Balance Disorder

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DESCRIPTION

Vestibular system is the link between the inner ear and brain which helps in balancing the person at the time of walking. Damage in the vestibular system leads to the vestibular balance disorder. Some of the common vestibular disorders include Benign Paroxysmal Positional Vertigo (BPPV), labyrinthitis, vestibular neuritis, acoustic neuroma, ototoxicity, etc. The vestibular apparatus mainly consists of semicircular canals which are filled with fluid. The position of the fluid changes upon the change in movement. Auditory nerve transmits the signals from ear to brain.

Some of the common causes of vestibular balance disorder are infections, medicines, poor blood circulation in ear, calcium debris in semicircular canals, traumatic brain injury, etc. Conditions which affect the skeletal or visual systems such as arthritis, eye-muscle imbalance also causes balance disorders. Some of the symptoms of vestibular balance disorder include dizziness, blurred vision, disorientation, falling or stumbling, etc. Less common symptoms are nausea, vomiting, diarrhea, anxiety, fear, changes in heart rhythm, confusion or behavioral changes, vertigo, etc.

Types of vestibular balance disorders

Some of them are as follows:

Benign Paroxysmal Positional Vertigo (BPPV): It is the common cause of positional vertigo. It is a sudden sensation of spinning. It causes mild to severe dizziness. It is usually triggered when tiny calcium crystals in ear move from their position.

Labyrinthitis: It is an inner ear infection. It occurs mainly due to inflammation of a fragile structure called labyrinth. This leads to disturbances in balance and hearing, ear pain, pus or fluid oozing out from ear, nausea, high fever, etc.

Vestibular neuritis: It is caused when viral infections such as chickenpox or measles. This affects the nerve that sends signals regarding the sound and balance from inner ear to brain. The most common symptoms are sudden dizziness with nausea, vomiting, and difficulty in walking.

Meniere's disease: People will have sudden attacks of vertigo, tinnitus (a ringing, buzzing, or roaring sound in their ears), hearing loss, and a feeling of fullness in the affected ear. This may be caused due to presence of excess fluid in the inner ear. The loss of hearing occurs gradually and may be permanent in some cases. In rare cases, people need surgery to relieve the symptoms. Surgery includes the removal of affected parts of inner ear.

Perilymphatic Fistula (PLF): This is due to the abnormal connection in between middle ear and fluid-filled inner ear. This makes you feel dizzy and sometimes may cause hearing loss. It can be caused by barotrauma (increased pressure in your ear) or a head injury. Surgery can help repair perilymph fistulas.

Diagnosis and Treatment

It can be diagnosed by performing various tests such as hearing test, vision examination, blood tests, imaging tests of the head and brain, clinical tests of balance, posturography, electronystagmography, videonystagmography, etc.

Treatment depends upon the condition of the disorder. Antifungals or antibiotics are commonly used for treating the ear infections that cause balance disorder. Smoking should be prevented. Usage of Epley maneuver causes reposition of particles in semicircular canals. In severe conditions, surgery is performed to treat the disorders.

CONCLUSION

Damage in the vestibular system leads to the vestibular balance disorder. Some of the common vestibular disorders include Benign Paroxysmal Positional Vertigo (BPPV), labyrinthitis, vestibular neuritis, acoustic neuroma, ototoxicity, etc. Some of the common causes of vestibular balance disorder are infections, medicines, poor blood circulation in ear, calcium debris in semicircular canals, traumatic brain injury, etc. Some of the symptoms of vestibular balance disorder includes dizziness, blurred vision, disorientation, falling or stumbling, etc. Treatment depends upon the condition of the disorder. Usage of Epley maneuver causes reposition of particles in semicircular canals.

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