



Treatment Updates

Dizziness

INTRODUCTION

Dizziness is a sense of unsteadiness. One's sense of balance depends on the brain processing information from a variety of sources including your eyes, ears, your joint position senses and other parts of your central nervous system. If the messages the brain receives from the sensory organs are contradictory or if the central processing part of the brain is not functioning properly one experiences a sense of dizziness or loss of balance. Vertigo is a special type of dizziness or unsteadiness. There is an hallucination of motion and that motion is characterized by a sensation of rotation or spinning. Sitting up or moving around tends to make the symptoms worse. Occasionally vertigo is severe enough to cause nausea and vomiting. When it comes to making a diagnosis the duration of the symptom whether it is minutes, hours or days is important.

VERTIGO

Vertigo can broadly be grouped into two categories, namely Peripheral Causes relating to disorders of the balance canals in the inner ears, and Central Causes which relate to disorders of the brain itself. Peripheral problems can be subclassified into those which have normal hearing and those in which the hearing is impaired.

VERTIGO WITHOUT HEARING LOSS

Benign Paroxysmal Positional Vertigo (BPPV)

BPPV involves intense brief episodes of vertigo associated with a change in head posture often occurring when one turns over in bed or sits up in the morning. It occurs when normal calcium carbonate crystals (otoconia) break loose and fall into the wrong part of the balance canals in the inner ear. When these particles move around they stimulate nerves in the ear causing episodes of vertigo. We don't know what causes BPPV but it may be a natural result of ageing, it may be the result of trauma or may occur in younger people for no apparent reason at all.

Inflammation of the inner ear (vestibular neuronitis or labyrinthitis)

Symptoms and signs include sudden intense vertigo which may persist for several days with nausea and vomiting, can be incapacitating requiring bed rest to minimize the signs and symptoms. Vestibular neuronitis generally subsides and clears up on its own. Recovery time may be shorter with vestibular rehabilitation exercises. Although the cause of these conditions is unknown they may be related to viral infection.

Vestibular Migraine

Typically occurs in people who have a personal family history of classic migraine. Nausea and vomiting are often warning signs. Vertigo may be triggered by turning your head quickly, being in a crowded or confusing place, driving or riding in a vehicle or even watching movement on television. Although more often than not the hearing is normal, vestibular migraine can be associated with altered hearing, usually a muffled sensation or a sensation of ringing in the ear. For most people with vestibular migraine the vertigo does not occur at the same time as a headache. Attacks of migrainous vertigo (Vestibular Migraine) can last from a few minutes to several days.

VERTIGO ASSOCIATED WITH HEARING LOSS

Meniere's Disease (idiopathic endolymphatic hydrops)

Characterized by episodes of rotational dysequilibrium, fullness in the ear, pressure sensation, fluctuating hearing loss, low pitch ringing in the ear, nausea and vomiting. Characteristically the unsteadiness lasts for 2-3 hours and very rarely more than 12 hours. As the disease progresses the episodes become more frequent and more severe and the prodrome or the warning signs of fullness, ringing and altered hearing acuity become less obvious. In advanced cases of Meniere's Disease (Stage 3) drop attacks



without loss of consciousness (Tumarkin's Crisis) can occur. The pathological cause of Meniere's Disease is a fluctuation in the fluid pressure in the inner ear (endolymph) the cause of Meniere's Disease is unknown.

ACOUSTIC NEUROMA

Acoustic Neuroma is a benign tumour that grows on the sheath of the nerve of hearing (Schwannoma). It is a non cancerous (benign) growth on the acoustic or the 8th cranial nerve which connects the inner ear to your brain. In most people, associated with unsteadiness there is diminished hearing in the affected ear. The vertigo associated with an acoustic neuroma is characteristically severe, always rotational, associated with nausea and vomiting and lasts for several hours.

SEROUS LABYRINTHITIS SECONDARY TO MIDDLE EAR PATHOLOGY

Simple middle ear infection does not cause inner ear symptoms (vertigo or diminished hearing). If an infection of the middle ear is prolonged and improperly treated secondary inflammatory changes (serous labyrinthitis) can occur in the inner ear. Typically the onset of inner ear symptoms are slow and lead to vertigo, staggering gait and diminished hearing acuity. Occasionally gross labyrinthitis (presence of bacterial infection within the labyrinth) occurs and this precipitates a crisis leading to total hearing loss, roaring tinnitus and wild rotatory vertigo with nausea, vomiting and prostration.

PERILYMPH FISTULA

Perilymph fistula is a condition characterized by the leak of inner ear fluid (perilymph) into the middle ear. This usually occurs through either the oval or the round window. It is usually post traumatic. The trauma may be head injury, pressure injury such as diving, or post surgical (post Stapedectomy). Certain congenital abnormalities of the cochlear or vestibular aqueduct increase the likelihood of perilymph fistula.

LIGHT HEADEDNESS OR FAINTNESS

A feeling of light headedness or faintness is sometimes confused with true vertigo. Presyncope is a term used for feeling faint and light headed without losing consciousness. Occasionally it is associated with nausea, pale skin and

clamminess. The causes of light headedness include:

- Drop in blood pressure
- Inadequate output of the heart
- Sensory disorders such as failing vision or nerve
- Damage in your leg (Peripheral Neuropathy)
- Joint and muscle problems
- Medications such as anti seizure drugs, sedatives and tranquilisers
- Anxiety disorders
- Hyperventilation

TREATMENT OF VERTIGO

BPPV

Treatment of BPPV is canalith repositioning, a simple procedure that involves your doctor or vestibular physiotherapist. The aim is to put the loose particles in the inner ear back into place and then to stabilise them. The success rate of this procedure (Epley's Manoeuvre) is about 90% but the procedure may need to be repeated.

VESTIBULAR NEURONITIS

Depending on the severity of the condition the treatment may involve reassurance, antiemetics, labyrinthine sedatives such as Phenergan or oral/parenteral steroids. There is evidence that vestibular rehabilitation exercises improve the outcome.

VESTIBULAR MIGRAINE

The treatment is twofold. Firstly a trial of anti migraine treatment usually confirms the diagnosis. Identification and elimination of trigger factors be they food related, stress related, or motion related help to decrease frequency of the attacks.

MENIERE'S DISEASE

The treatment of Meniere's Disease initially involves education, reducing body fluid retention by a low salt low caffeine diet, occasionally supplemented by oral diuretics. Surgery is rarely required and a variety of surgeries including Myringotomy and Insertion of Tympanostomy Tube, Tympanostomy Tube plus ultrasonic pulsation, endolymphatic sac decompression, endolymphatic shunting and a variety of other surgical procedures have been advocated.

ACOUSTIC NEUROMA

Acoustic neuromas are occasionally managed conservatively. There is increasing evidence about the benefit of stereotactic radiotherapy. Mainstay treatment involves surgery.



NYSTAGMUS

Nystagmus is a term used for rapid movement of the eyes from side to side where movement in one direction is slow and in the other direction is fast. It occurs when one inner ear loses its function either completely or partially and the other inner ear becomes dominant. If the left inner ear is damaged and the right inner ear becomes dominant the eye moves slowly to the left and rapidly to the right. That is to say the slow phase of nystagmus is towards the damaged side and the fast phase towards the undamaged side. This is the most common form of nystagmus and is referred to as a paralytic or normal form of nystagmus. In acute irritation of the inner ear such as labyrinthitis or Meniere's Disease the direction of the nystagmus can be reversed. This is called irritative nystagmus. In this condition the affected ear becomes hyperactive and so the dominant or rapid movement is towards the affected side with the slow phase towards the normal side.

**If further information is required,
please email us:
enquires@earnosethroat.com.au**