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Meniere's Disease

WHAT IS MENIERE'S DISEASE?

Meniere's disease, also called idiopathic endolymphatic hydrops, is a disorder of the inner ear. Although the cause is unknown, it probably results from an abnormality in the fluids of the inner ear. Meniere's disease is one of the most common causes of dizziness originating in the inner ear. In most cases only one ear is involved, but both ears may be affected in about 15% of patients. Meniere's disease typically starts between the ages of 20 and 50 years. Men and women are affected in equal numbers.

WHAT ARE THE SYMPTOMS?

The symptoms of Meniere's disease are episodic rotational vertigo (attacks of a spinning sensation), hearing loss, tinnitus (a roaring, buzzing, or ringing sound in the ear), and a sensation of fullness in the affected ear. Vertigo is usually the most troublesome symptom of Meniere's disease. It is defined as a sensation of movement when no movement is occurring. Vertigo is commonly produced by disorders of the inner ear, but may also occur in central nervous system disorders. The vertigo of Meniere's disease occurs in attacks of a spinning sensation and is accompanied by dysequilibrium (an off-balance sensation), nausea, and sometimes vomiting. The vertigo lasts for 20 minutes to two hours or longer. During attacks, patients are usually unable to perform activities normal to their work or home life. Sleepiness may follow for several hours, and the off-balance sensation may last for days.

There may be an intermittent hearing loss early in the disease, especially in the low pitches, but a fixed hearing loss involving tones of all pitches commonly develops in time. Loud sounds may be uncomfortable and appear distorted in the affected ear.

The tinnitus and fullness of the ear in Meniere's disease may come and go with changes in hearing, occur during or just before attacks, or be constant.

The symptoms of Meniere's disease may be only a minor nuisance, or can become disabling, especially if the attacks of vertigo are severe, frequent, and occur without warning.

HOW IS A DIAGNOSIS MADE?

The physician will take a history of the frequency, duration, severity, and character of your attacks, the duration of hearing loss or whether it has been changing, and whether you have had tinnitus or fullness in either or both ears. You may be asked whether there is a history of syphilis, mumps, or other serious infections in the past, inflammations of the eye, an autoimmune disorder or allergy, or ear surgery in the past. You may be asked questions about your general health, such as whether you have diabetes, high blood pressure, high blood cholesterol, thyroid, neurologic or emotional disorders. Tests may be ordered to look for these problems in certain cases. The physical examination of the ears, and other structures of the head and neck is usually normal, except during an attack.

An audiometric examination (hearing test) typically indicates a sensory type of hearing loss in the affected ear. Speech discrimination (the patient's ability to distinguish between words like "sit" and "fit") is often diminished in the affected ear. An ENG (electronystagmograph) may be performed to evaluate balance function. This is done in a darkened room. Recording electrodes are placed near the eyes. Wires from the electrodes are attached to a machine similar to a heart monitor. Warm and cool water or air are gently introduced into each ear canal. Since the eyes and ears work in a coordinated manner through the nervous system, measurement of eye movements can be used to test the balance system. In about 50% of patients, the balance function is reduced in the affected ear. Other balance tests, such as rotational testing or balance platform, may also be performed to evaluate the balance system.

Other tests may be done! Electrocochleography (ECoG) may indicate increased inner ear fluid pressure in some cases of Meniere's disease. The auditory brain stem response (ABR), a computerized test of the hearing nerves and brain pathways, computed tomography (CT) or, magnetic resonance imaging (MRI) may be needed to rule out a tumor occurring on the hearing and balance nerve. Such tumors are rare, but they can cause symptoms similar to Meniere's disease.

WHAT TREATMENT WILL THE PHYSICIAN RECOMMEND?

DIET AND MEDICATION: A low salt diet and a diuretic (water pill) may reduce the frequency of attacks of Meniere's disease in some patients. In order to receive the full benefit of the diuretic, it is important that you restrict your intake of salt and take the medication regularly as directed.

Anti-vertigo medications, e.g., Antivert□ (meclizine generic), or Valium□ (diazepam generic), may provide temporary relief. Anti-nausea medication is sometimes prescribed. Anti-vertigo and anti-nausea medications may cause drowsiness.

LIFE STYLE: Avoid caffeine, smoking, and alcohol. Get regular sleep and eat properly. Remain physically active, but avoid excessive fatigue. Stress may aggravate the vertigo and tinnitus of Meniere's disease. Stress avoidance or counseling may be advised.

PRECAUTIONS: If you have vertigo without warning, you should not drive, because failure to control the vehicle may be hazardous to yourself and others. Safety may require you to forego ladders, scaffolds, and swimming.

WHEN IS SURGERY RECOMMENDED?

If vertigo attacks are not controlled by conservative measures and are disabling, one of the following surgical procedures might be recommended:

1. The endolymphatic shunt or decompression procedure is an ear operation that usually preserves hearing. Attacks of vertigo are controlled in one half to two-thirds of cases, but control is not permanent in all cases. Recovery time after this procedure is short compared to the other procedures.
2. Selective vestibular neurectomy is a procedure in which the balance nerve is cut as it leaves the inner ear and goes to the brain. Vertigo attacks are permanently cured in a high percentage of cases, and hearing is preserved in most cases.
3. Labyrinthectomy and eighth nerve section are procedures in which the balance and hearing mechanism in the inner ear are destroyed on one side. This is considered when

the patient with Meniere's disease has poor hearing in the affected ear. Labyrinthectomy and eighth nerve section result in the highest rates for control of vertigo attacks.

Other operations or treatments may be advised in some cases. If surgical treatment seems to be needed, the risks and benefits should be thoroughly discussed with your surgeon. Although there is no cure for Meniere's disease, the attacks of vertigo can be controlled in nearly all case

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