

## Doctor, Please Explain Ménière's Disease

### **Insight into the diagnosis and management**

- **What are the symptoms?**
- **How is a diagnosis made?**
- **What treatments are available?**
- **and more...**

Ménière'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. In most cases only one ear is involved, but both ears may be affected in about 15 percent of patients. Ménière'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 Ménière'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. Among them are:

- Attacks of a spinning sensation or episodic rotational vertigo;
- Roaring, buzzing or ringing sound in the ear or tinnitus;
- Sensation of fullness in the affected ear;
- Intermittent hearing loss, especially in the low pitches during the early development stage;
- Fixed hearing loss involving all pitches in the advanced stage of the disease;
- Uncomfortable and distorted sounds.

From all the Ménière's disease's symptoms, vertigo is usually the most troublesome. It is commonly produced by disorders of the inner ear, but may also occur in central nervous system disorders. Vertigo may last 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.

### **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 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.

When the history has been completed, diagnostic tests will check your hearing and balance functions. They may include:

#### *For hearing*

- 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.

#### *For balance*

- An **ENG (electronystagmograph)** may be performed to evaluate balance function. In a dark room, recording electrodes are placed near the eyes. Warm and cool water or air is gently introduced into each ear canal. Since the eyes and ears work simultaneously through the nervous system, measurement of eye movements can be used to test the balance system. In about 50 percent of patients, the balance function is reduced in the affected ear.
- **Rotational testing or balance platform**, may also be performed to evaluate the balance system.

#### *Other tests*

- **Electrocochleography (ECoG)** may indicate increased inner ear fluid pressure in some cases of Ménière'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 Ménière's disease.

## How is Ménière's Disease medically managed?

Aside from lifestyle changes, your doctor may advise you to take a diuretic (water pill) to reduce the frequency of attacks. Anti-nausea and anti-vertigo medications may also be prescribed to provide temporary relief. However, a side-effect of the medications may be drowsiness.

Another medication that may be used is gentamicin. It is an antibiotic, commonly administered in the form of drops or injections, which causes a partial loss of balance function in the treated ear, controlling vertigo in about three fourths of cases and usually preserving hearing. Apart from a period of disequilibrium that can occur as the patient adjusts to the new level of balance, this treatment is usually very well tolerated. It is also significantly simpler and less invasive than other surgical treatments.

In addition, stress management counseling may be recommended, as stress tends to aggravate the symptoms of vertigo and tinnitus. 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:

- Intratympanic treatment, also known as chemical labyrinthotomy, is an office procedure in which a medicine, such as gentamicin, is injected into the middle ear. The endolymphatic shunt or decompression procedure is an ear operation that is 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.
- 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.
- 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 Ménière's disease has poor hearing in the affected ear. Labyrinthectomy and eighth nerve section result in the highest rates for control of vertigo attacks.

## **Tips to reduce the frequency of Ménière's Disease episodes**

- Avoid caffeine, smoking, alcohol.
- Restrict your salt intake.
- Eat properly.
- Get plenty of sleep.
- Remain physically active, but avoid excessive fatigue.
- Avert stress and anxiety, as it may aggravate vertigo and tinnitus.
- Consider incorporating stress management techniques into your lifestyle.