Vertigo: Its Causes and Treatment

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A 76-year-old man went to the hospital complaining that he had experienced vertigo for three years and that it had gotten worse in the last two to three months. What he meant by vertigo, he explained, was a sensation of "things in the house spinning," along with nausea lasting less than a minute. He felt fine if he stayed in bed and did not move. He did not have slurred speech, weakness of extremities or any other symptoms that might point to a neurological or brain problem.

He was first diagnosed with Meniere's syndrome, a mysterious disorder that causes severe vertigo, hearing loss and a ringing or other sensation in the ears. He was treated with the drug Diazide®. After that, everything had been fine until the past few months, when he had several new attacks of the same symptoms, but with more severe nausea and vomiting. He was now afraid that he was about to have another attack.

A series of tests revealed that instead of Meniere's Disease, the man was actually suffering from another illness called Benign Paroxysmal Positional Vertigo, or BPPV. Meniere's Disease and BPPV are the two most common causes of vertigo. While one can be mistaken for the other, as in this example, they are different diseases with different symptoms and different treatments.

What Is Vertigo?

Vertigo is not a disease in itself, but rather a symptom that can have any number of causes. The famous Alfred Hitchcock film notwithstanding, a fear of heights is not normally one of them. Vertigo is defined in Webster's dictionary as a feeling "in which the external world seems to revolve around the individual or in which the individual seems to revolve in space."[2] Occurring without warning, it comes and goes unpredictably and is often accompanied by nausea, vomiting and problems with equilibrium. Mild episodes may feel more like a rocking sensation or mere light-headedness.

Common Causes of Vertigo

Benign Paroxysmal Positional Vertigo

Benign paroxysmal positional vertigo (BPPV), the kind that was mistaken for Meniere's Disease in the above example, is one of the most common types of vertigo. It has many causes, not all of which are well understood. The most popular current theory is that it is usually caused by free-floating calcium carbonate crystals in an area of the inner ear called the posterior semicircular canal, which is part of the vestibular system.

The vestibular system, located in and around the ear, is responsible for integrating what we see, hear and feel with head and body movement. In short, it controls our body's sense of equilibrium. More specifically, the vestibular system works by

monitoring head movement and then sending this information to organs inside the ear, which then relay the information to the brain.

Our ears play an essential part in this process. The inner ear contains an area called the labyrinth, in which are found three semicircular canals; these canals are surrounded by a special fluid. The canals' function is to transmit information about head movement to the vestibular nerve. This nerve passes the information along to the areas of the brain that control bodily coordination.

People with BPPV feel lightheaded. The lightheadedness is is often accompanied by nausea, vomiting, sweating and a skin pallor. It usually comes on suddenly and goes away in less than 30 seconds.

BPPV can be brought on by a sudden change in body position, such as turning over in bed or getting in and out of bed. Many people have only a single passing bout of BPPV but, for some, BPPV returns unexpectedly.

Meniere's Syndrome

Meniere's syndrome is another common cause of vertigo. Characterized by deafness, ringing in the ears and occasional vertigo,[9,11] its cause is unknown. People with Meniere's get a feeling of fullness or pressure in the ear, followed by hearing loss in one ear, which is soon followed by vertigo. The vertigo builds in intensity over several hours and is sometimes accompanied by nausea and vomiting. The hearing loss gradually becomes total, at which point the vertigo begins to go away until it finally disappears.

Less Common Causes

There are many less common causes of vertigo. These include stroke, brain tumors, low blood pressure, heart arrhythmias, multiple sclerosis and migraine headache. Many prescription and non-prescription drugs can cause dizziness or vertigo. In some susceptible people, cold and flu medicines, painkillers, as well as treatments for high blood pressure, diabetes, thyroid disease, depression and anxiety can produce lightheadedness and dizziness.

Non-Surgical Treatments for BPPV

The most reliable treatment for BPPV is a fairly simple, non-surgical procedure called canalith repositioning..[12] This is done by changing the patient's head and body position in a series of steps that are thought to dislodge the calcium crystals within the vestibular labyrinth that caused the problem.

Canalith repositioning is usually done under expert supervision, but it is easy enough that doctors often teach it to BPPV sufferers and their families.

Many doctors also prescribe drugs called vestibular suppressants. Because of unwanted side effects, such as lethargy and impaired balance, they are given sparingly and only for more severe and long-lasting attacks. The elderly are particularly sensitive to these side effects.

Another concern about these drugs is that they may slow or prevent the central nervous system from adjusting to a problem in the vestibular system. While vetibular suppressants often help lessen symptoms, especially in the short term, surgery is the ultimate answer for the unlucky few with severe BPPV-related vertigo that does

not respond to the canalith repositioning procedure.[13]

Treating Meniere's

The treatments for Meniere's disease are generally not as effective as those for BPPV. Severe attacks are treated with vestibular suppressant drugs; in between, Meniere's symptoms are often controlled by reducing salt intake and by taking diuretic drugs, which reduce the amount of fluids in the body.

For similar reasons, people with Meniere's should avoid alcohol, coffee, chocolate and other foods that are high in sugar or salt. As with BPPV, surgery is a last resort.

Conclusion

Vertigo is not a disease but a symptom that can have many causes. The most common are benign paroxysmal positional vertigo (BPPV) and Meniere's disease, which for most people can be treated and controlled without surgery. The best treatment for BPPV, a simple, non-surgical procedure called canalith repositioning, is easy to perform; both sufferers and their families can be trained to do it. Another option, vestibular suppressants drugs, has serious side effects and should be used very cautiously.

When should you seek medical help?

The answer is that anyone with recurring or severe dizziness or vertigo should see a doctor. Most of the time, the most serious cause will be BPPV or Meniere's, both of which can be treated and controlled with drugs and other non-surgical therapy. It is particularly urgent, however, to seek medical treatment if the dizziness or vertigo occurs together with one or more of the following symptoms, which can be a sign of a more serious underlying heath problem:

- Severe or "different" headache
- Blurred vision
- Hearing loss
- Speech problems
- Weakness in a leg or arm
- Fainting
- Problems walking
- Numbness or tingling
- Chest pain or changes in heart rate

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References

1. Drachman DA. A 69-year-old man with chronic dizziness. JAMA. 1998; 280(24): 2111-2118.

2. Webster's Third New International Dictionary of the English Language, Unabridged. Springfield, Mass: Meriam-Webster Inc; 1986; 664, 2546. return

3. Baloh RW, Halmagyi GM et al. Part II. Clinical evaluation. In Baloh RW, Halmagyi GM. Disorder of the vestibular system. Oxford University Press Inc., New York. 1996:157-274.

4. Baloh RW. VIII. The vestibular system. In: Canalis RF and Lambert PR. The ear, comprehensive otology. Lippincott Williams & Wilkins, Philadelphia. 2000:647-693.

5. Saeed SR. Fortnightly review: diagnosis and treatment of Meniere's disease. BMJ. 1998; 316(7128): 368-372.

6. Furman JM and Cass SP. Primary care: benign paroxysmal positional vertigo. NEJM. 1999; 341(21): 1590-1596.

7. Baloh RW. Vertigo. The Lancet. 1988; 352(9143): 1841-1846.

8. Hoston JR and Baloh RW. Current concepts: acute vestibular syndrome. NEJM. 1998; 339(10): 680-685.

9. Meniere P. Pathologie auricularie: memorires sur des lesions de l'oreille interne donnant lieu a des symptoms des congestion cerebrale apoplectiforme. Gaz Med Paris. 1961; 16: 597-601. return

10. Furman JM, Jacob RG. Psychiatric dizziness. Neurology. 1997; 48: 1161-1166.

11. Froehling DA, Silverstein MD et al. Does this dizzy patient have a serious form of vertigo? JAMA. 1994; 271(5): 385-388. return

12. Froehling DA, Bowen JM et al. The canalith repositioning procedure for the treatment of benign paroxysmal positional vertigo: a randomized controlled trial. Mayo Clinic Proceedings. 2000; 75(7): 695-700. return

13. Foster C, Baloh RW et al. Part IV. Treatment of vertigo. In: Baloh RW and Halmagyi GM. Disorder of the vestibular system. Oxford University Press, In. New York. 1996: 541-599.