Symptom: Dizziness. Cause: Often Baffling.

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On the Fourth of July, a 63-year-old man was taken by wheelchair into the emergency room of a suburban Virginia hospital, overwhelmed with dizziness and nausea and gripped by sweat-inducing anxiety.

"I felt dim and lightheaded, like I was just going to fade out," said John Farquhar, a semiretired consultant in Washington. "I said, 'I'm going to die.'"

His wife, Lou, a nurse, had driven him to the hospital, taking big curves gingerly because the motion of a sweeping turn "made me feel like I was pulling 30 G's like a fighter pilot," said Mr. Farquhar, who otherwise was healthy and fit.

The attacks had begun the previous day, out of the blue, while he was playing with the couple's dog, Sascha.

Lifting her high in the air, "I snapped my head back, and suddenly it seemed that my body was turning, and the room was spinning around," Mr. Farquhar recounted. "I felt profoundly dizzy and nauseated."

The episode passed, but the queasiness returned not long afterward, set off by the on-screen action on a DVD. When Mr. Farquhar got out of bed the next day, the world was spinning so violently that he crumpled to his knees, and he could barely make his way to the bathroom, where he vomited, leading to the trip to the E.R.

Dizziness is one of the most miserable of sensations, and it can be disabling.

The technical term for the false sensation that you and the world are spinning is vertigo. (In Alfred Hitchcock's film "Vertigo," the James Stewart character actually suffers from acrophobia, or fear of heights.)

There are many causes of vertigo, most of them temporary and treatable, but sometimes the condition signals a serious problem, like a tumor or a stroke. Dizziness and lightheadedness are among the most frequent complaints that cause people to seek medical help.

Although doctors often see patients with the symptom, its cause can be a challenge to determine, said Dr. Jonathan Olshaker, chief of the emergency department at Boston Medical Center, who has written a textbook chapter on vertigo.

"The staff has a concern that they're not going to be able to figure out what it is, or that the person is a difficult-to-treat patient," Dr. Olshaker said. In fact, a vast majority of patients have a specific, identifiable cause for their dizziness, he said.

When he lectures other doctors, Dr. Olshaker said, he tells them: "You hate this topic. Dizziness is associated with nausea, fear, anxiety and frustration -- and that's in the physician. Never mind the patient!"

Even when the cause is probably not serious, doctors generally are cautious, ordering a number of tests

and sometimes consulting with neurologists to make sure the cause of the vertigo is not life-threatening.

Mr. Farquhar's symptoms galvanized the emergency room staff members, who chided him for not calling 911 and immediately checked for evidence of a stroke or a heart attack. An IV was started, and blood was drawn for analysis. He was also asked to perform a series of neurological tasks, which he passed easily, and he answered repeated questions about his medical history and medications. (Many drugs can bring on the symptoms.)

Ruling out life-threatening causes, the doctors told Mr. Farquhar that he was most likely suffering from benign paroxysmal positional vertigo, or B.P.P.V., a common cause of dizziness caused by a malfunction of the inner ear's balance mechanism.

The problem accounts for perhaps 25 to 40 percent of patients seeking medical attention for dizziness. "Paroxysmal" refers to the episodic pattern of vertigo attacks, and "positional" means that the spinning sensations are brought on by certain movements.

Tilting the head back to look upward is a typical trigger. The disorder has been nicknamed "top-shelf vertigo," and hair salon customers sometimes experience it when leaning back for a shampoo, as do patients sitting in dental chairs.

The diagnosis and treatment of vertigo have markedly improved in the last two decades. The cause of most benign positional vertigo is now believed to be calcium debris that has dislodged from a part of the inner ear and strayed into one of the fluid-filled semicircular canals of the sensitive vestibular system.

The system is a cluster of structures that keeps the brain updated on the body's orientation and movement in space.

These microscopic flecks of calcium debris do not in themselves lead to problems, but sometimes in their meandering they brush against delicate, hairlike cells, sending misinformation to the brain.

When those signals conflict with more accurate signals from other nerves, the brain responds with disorientation and vertigo.

The three semicircular canals of the inner ear loop out -- more or less at right angles, like three edges of a box meeting at the corner -- from a chamber called the vestibule.

The slight fluid movements in these canals in response to head movements and gravity activate the hair-trigger cells that relay positional information to the brain.

Inside the vestibule, scores of tiny "stones" called otoliths are attached to a membrane, and when the head turns in any direction, the slight force imparted to the otoliths is translated into nerve messages about motion and orientation.

The road to benign positional vertigo starts when some of the otoliths, or fragments of them, come loose from the membrane and go rafting in the endolymph, the fluid inside the tiny canals.

They tend to settle by gravity in the rearmost canal, which loops down and up like the debris trap under a sink.

A variety of things can set the "ear rocks," as they're also known, to wandering: blows to the head or sudden movements (roller coasters can have this effect), and perhaps most often, simply the wear and tear of aging on the balance organs.

It may be hard to identify the cause of a particular episode, and for many people the first time they have symptoms is waking up in the morning or rolling over in bed.

Benign paroxysmal positional vertigo can be distinguished from some other disorders by the fact that hearing is not affected, that dizziness occurs in repeated brief episodes (usually a few seconds to a minute) and can be provoked by specific body movements.

In fact, the classic test for this type of vertigo is performed by having the patient turn the head at an angle and lie down, first on one side, then the other, while the physician watches for a characteristic jerking movement of the eyes called nystagmus.

The emergency room doctors diagnosed Mr. Farquhar's problem in part by the results of this test. While waiting for an appointment with a Washington specialist in balance problems, Dr. Dennis Fitzgerald, Mr. Farquhar was essentially bedridden, propped up with pillows and sedated with Valium.

By the time he saw the doctor a week later, he felt slightly better, as if his brain were getting accustomed to the disinformation from his affected ear. But he felt nowhere near normal.

Dr. Fitzgerald, who says he has treated more than 2,000 cases of benign paroxysmal positional vertigo in the last 15 years, confirmed the diagnosis. He then performed what has become accepted as the definitive treatment, a series of head gyrations called the Epley maneuvers.

The maneuvers involve moving the head into four different positions sequentially, taking advantage of gravity to roll the calcium flecks out of the sensitive part of the canal to a place where they cause less trouble.

In cases like Mr. Farquhar, the Epley maneuvers are repeated, the patient sits up, and the treatment is complete. For the next 48 hours, Mr. Farquhar was cautioned to avoid a variety of movements that could send the debris tumbling back into the canal.

"Most doctors who do this say that 80 percent of patients have their symptoms alleviated in one set of treatments," Dr. Fitzgerald says.

The remaining 20 percent, he added, need repeated treatments, and the overall recurrence rate is 25 percent to 30 percent, though the episodes may not come back for months or years.

Within a few days, Mr. Farquhar was much improved and was able to walk several blocks and go into his office to work. Two months later, he continued to be free of nearly all his symptoms, except a brief lingering feeling of unease just after waking up in the morning.

For all but the most intractable cases, which occasionally require surgery, the simple and low-tech Epley maneuvers rank among the most effective and certainly the least costly of treatments for such a common and disabling source of misery.

"Vertigo is a horrible feeling," said Dr. Olshaker, the Boston emergency room chief. "The physician

does need to have empathy for these patients. And in recent time, we're seeing more awareness of the condition and the Epley maneuvers, both in the E.R. and the primary care clinic."