Abstract

Dizziness is a common presentation to the outpatient, primary care physician. Its persistence, associated with hearing changes, should prompt further evaluation for more rare diagnoses such as an acoustic neuroma. Although not malignant, timely management of an acoustic neuroma is essential to prevent chronic facial paresthesia, pain, or taste disturbance, and more rarely death.

CASE PRESENTATION

A 34-year-old female presents to the primary care physician with a 2-week history of fatigue, generalized headache, intermittent right-sided tinnitus, and dizziness that started abruptly after a dental procedure. Tinnitus is high-pitched and most often noted in the morning. The dizziness occurs mainly when changing from a supine to seated position. She has no pertinent medical history, engages in regular cardiovascular exercise but is plagued with an addiction to coffee, approximately 3 cups a day. She denies taking any medications or over-the-counter supplements.

Physical exam, including vital signs and orthostatic blood pressure measurement, is unremarkable. Differential diagnoses included benign positional vertigo and caffeine-induced headache. Plan was to obtain an audiogram, keep a headache diary, decrease caffeine consumption, and improve hydration on days of exercise.

While awaiting the audiogram, the patient presented again to her primary care physician for worsening fatigue and self-diagnosed anxiety, in addition to her stable dizziness, tinnitus, and headache. Physical exam was, once again, unremarkable. Differential diagnoses were expanded to include anemia, thyroid disorder, and vestibular migraine. Plan was to trial sumatriptan and begin laboratory evaluation for her fatigue and hair loss. Labs were unremarkable for anemia, electrolyte or vitamin imbalance, and thyroid disorder.

Almost one year later, the patient returns with persistent symptoms of fatigue, anxiety, tinnitus, dizziness, and intermittent headaches. She reports that her symptoms were overwhelming and affected all aspects of her life, not relieved with the sumatriptan. Physical exam, once again, was unremarkable. Differential diagnoses were again expanded to include Meniere’s disease, intracranial mass, and somatization disorder. Plan was to obtain the previously ordered audiogram, non-urgent magnetic resonance imaging (MRI) of her brain, and consultations with Psychology for coping techniques and Otolaryngology for her tinnitus and dizziness.

THE DIAGNOSIS

The audiogram was notable for asymmetric hearing loss (Fig 1) and subsequent imaging with MRI Brain confirmed the diagnoses of a 5mm intracanalicular tumor, suggestive of acoustic neuroma (Fig 2). The patient was offered proton therapy but elected for definitive, surgical intervention with
Figure 1: Audiogram depicting unilateral, sensorineural hearing loss at 4000 Hz of the right ear.
Neurosurgery. She underwent translabyrinthine resection of the intracanalicular acoustic neuroma. Her postoperative course was complicated by facial weakness but resolved after one year. Follow-up imaging confirmed complete tumor resection and she continues to do well two years after surgery, without recurrence of the acoustic neuroma.

THE DISCUSSION

Headaches, dizziness, and tinnitus are challenging concerns because the differential diagnoses are quite broad. In this case, since the patient presents often, the symptoms were more likely to be acute and the more common diagnoses of benign paroxysmal positional vertigo, vestibular migraine, and caffeine-induced headache were considered. As the symptoms became more persistent, the clinician correctly broadened the differential diagnoses list and requested the appropriate imaging and specialty follow-up.

This patient’s diagnosis, a right-sided acoustic neuroma, was delayed by poor follow-up and procrastination in obtaining the audiogram. Fortunately, the acoustic neuroma is a slow-growing, benign tumor that develops from schwannoma cells along the branches of cranial nerve VIII, the vestibulocochlear nerve.1 Acoustic neuroma is also known as vestibular neuroma or schwannoma, most commonly affecting individuals between 65 and 74 years old with a prevalence of 1 in 100,000.2,3,4 The most common risk factor is having a history of neurofibromatosis type 2 or exposure to high-dose radiation.5 Increased prevalence, over the last several years, has been attributed to advanced imaging technology.3 Although it is a slow-growing tumor, its growth can compresses the facial and trigeminal nerves causing facial paresthesia, pain, and taste disturbance.6 Rarely, the tumor can compress the brainstem and cause death.6,7 It can be monitored for growth or treated with radiation and/or surgery.

THE TAKEAWAY

Unfortunately, the etiology of patients’ concerns cannot always be determined. But, it should be the responsibility of the primary care physician to evaluate potentially life-threatening conditions for persistent symptoms. This case demonstrates balancing the common with the uncommon differential diagnoses and illustrates the patient’s role in adherence to the treatment plan. Although headaches, dizziness, and tinnitus are non-specific symptoms, the persistence of them should warrant further investigation with more advanced imaging and specialty consultation.

References
