Assignment Details: Chief Complaint

“Dizziness and hearing difficulty.”

History of Present Illness

A 64-year-old man presents to his PCP complaining of intermittent episodes of dizziness occurring over the past year. The dizziness, described as a spinning sensation, comes every 1 to 2 weeks and generally lasts for 6 to 12 hours. These episodes often are accompanied by nausea and vomiting. He has more recently noticed hearing fluctuations, especially in his left ear. The hearing loss is worse just before and during attacks and then improves. He also now describes a sense of aural fullness and tinnitus, described as a low-frequency blowing or roaring sound in the ear, associated with the episodes. He attributes these symptoms to noise exposure with his work. He has taken over-the-counter meclizine to help with the dizziness, with some relief of the symptoms.
Review of Systems
The patient’s ROS is positive for vertigo, tinnitus, hearing loss, nausea, and vomiting. He has occasional headaches that respond to treatment with acetaminophen. His ROS is negative for fever, chills, weight loss, or fatigue.

Relevant History

The patient has had no major illnesses, injuries, surgeries, or hospitalizations. He is a lifelong nonsmoker and drinks one to two glasses of wine per week. He is employed as a high school music teacher and plays in a band part-time on weekends. The patient is married and has three grown children who are all in good health. His family history is significant for hypertension in both parents. There is no family history of cancer, early heart disease, or diabetes.
Allergies
No known medical allergies; no known drug allergies.
Medications

Meclizine 25 mg PO TID OTC, PRN.
Acetaminophen, 500 mg PRN.

Physical Examination

Vitals: T 37°C (98.6°F), P 76, R 14, BP 132/82, HT 177.8 cm (70 in.), WT 81.65 kg (180 lbs), BMI 25.8.

General: Well-developed and nourished 64-year-old male patient in no acute distress.

Psychiatric: Appears mildly anxious.

Skin, Hair, and Nails: Skin warm and dry, no rashes or bleeding tendency. No abnormal findings with hair or nails.

ENT/Mouth: TMs appear pearly, gray with no fluid noted. Hearing is decreased in the left ear as compared to the right on gross testing. Oral mucosa is moist, dentition in good repair with no caries or erosions.

Neck: Supple with no adenopathy or thyroid enlargement.

Lungs: Clear to auscultation bilaterally.

Heart: RRR, without murmur, gallop, or rub.

Abdomen: Soft with no masses, organomegaly, or tenderness. Active bowel sounds heard in all quadrants.

Neurologic: Alert and oriented ×3; immediate, recent, and remote memory intact; Cranial nerves II–XII grossly intact; strength 3/5 and DTRs 2+ symmetrical in all extremities; sensation, coordination, balance, cerebellar function, and gait intact.

\*\* Need Substantive first reaction to this post by Ms.A due 10/5/2023
\*\* Discussion 1:

Chief Complaint: “Dizziness and hearing difficulty.”

Please identify and discuss at least 3 differential diagnoses, using your pertinent positive subjective and objective findings, please indicate how you ruled in and ruled out the tentative diagnosis.
Vestibular migraine - The symptoms may manifest as a headache aura or independently of headaches. Vertigo can last between minutes and hours, and those suffering can additionally feel a sense of imbalance.

Rule out: This is an improbable diagnosis for this patient, as vertigo, loss of hearing, and tinnitus are not present.

Conductive hearing loss is caused by cerumen or a foreign material obstructing the external auditory canal, disorders of the external or the middle ear, tympanic membrane perforation, ossicular chain disruption, middle ear tumor, a disease called eustachian tube dysfunction, or cholesteatoma.

Rule out: This may not be the most probable cause of dizziness or vertigo, as the majority of these conditions do not induce these symptoms.

Presbycusis (age-associated hearing loss) is the most prevalent cause of adult sensorineural hearing loss.  This usually leads in a symmetrical, high-energy hearing loss that can proceed to total hearing loss.

Rule out: This is not a particularly likely diagnosis since presbycusis hearing loss develops over time and does not vary, and it does not present with the usual triad of vertigo, loss of hearing, and tinnitus.

What is the most likely diagnosis? Using your pertinent positive subjective and objective findings, please indicate how you ruled in your final diagnosis.
Meniere Disease is characterized by episodes of vertigo and loss of hearing, which are frequently accompanied with tinnitus, discomfort, pressure, or auditory fullness. Patients typically have such signs for between three and five years before being diagnosed. Despite only experiencing symptoms for a year, this patient's dizziness that lasts from six to twelve hours and other concerns point to vertigo as their most likely diagnosis.

Demonstrate your understanding about the pathophysiology in regard to the most likely diagnosis. Discuss the pathophysiology of each signs and symptoms that your patient presented.
Meniere Disease is a hearing disorder, usually appears between the ages of 20 and 40. It is a histological disorder characterized by endolymphatic hydrops, which results in the degeneration of vestibular and cochlear hair cells. Infection, trauma, tumor, or autoimmune or inflammatory factors can all contribute to this. Idiopathic hearing loss is the most common etiologic type, with auditory loss being a low-frequency, unilateral sensory impairment.

Should tests/imaging studies be ordered? Which ones? Why?
When two or more unplanned bouts of vertigo occur, each lasting 20 minutes to 12 hours, a clinical diagnosis can be made.

Audiometric testing was done in the afflicted ear to record low- to mid-frequency sensorineural loss of hearing (testing should be undertaken during an episode of vertigo if feasible and in between occurrences to show the fluctuating pattern of the hearing loss).

Tests/imaging beyond the primary care setting

Vestibular evaluation— With the advancement of MD, further testing, including as ENG, rotary chair testing, and computerized dynamic posturography, may indicate deteriorating peripheral vestibular function and thermally induced nystagmus impairment.

MRI of the temporal bone - Although these results are not diagnostic, MRI or CT are used to screen out CNS lesions that resemble MD, such as tumors, aneurysms, or demyelinating diseases.

What are the next appropriate steps in management?
Change patient’s diet to 2 grams low-sodium per day. If required, a diuretic such as acetazolamide might be added. Diazepam (2 to 5 mg) or meclizine (25 mg) taken orally may help relieve the symptoms of an acute vertigo attack. Diazepam 2 mg was ordered to be given PRN up to QID for the individual with adequate control of the symptoms, as meclizine was previously attempted and failed. During the examination, the patient was sent to an otolaryngology consultation and audiology consultation; Surgical therapy is saved for instances that do not respond.

What are the diagnostic criteria and treatment options for this diagnosis? Provide references for your response.
Based on symptoms such as vertigo, tinnitus, and loss of hearing, MD is a medical diagnosis.  Diagnostic examinations rule out vestibular complaints and confirm hearing loss. For up to 90% of MD patients, noninvasive management which includes medication, vestibular therapy, and lifestyle modifications can allow them continue with their everyday activities. 90%–95% of individuals respond well to treatment, and early recommendation to an otolaryngologist slows the progression of hearing loss.

What are the pertinent ICD-10 and CPT (E/M) codes for this visit? Provide a short rationale.
ICD-10 code - H81.0 Meniere’s Disease

CPT code 99214: Established patient office or other outpatient visit, 30-39 minutes

This visit is on an established patient with full physical exam, management and teaching that will need about 30-35 mins encounter.

What is the appropriate patient education for this case?
Education should include discussion of the disease and all important information about it, lifestyle adjustments including intake of low sodium diet and emphasizing the importance of patient’s compliance to treatment and expectations.

If not managed appropriately, what is/are the medical/legal concern(s) that may arise?
Due to its progressive nature, Meniere's Disease can be difficult to treat in general care, leading to substantial anxiety and perhaps disability. Aiming to avoid progressive hearing loss, long-term therapy minimizes handicap, relieves tinnitus symptoms, and reduces hearing loss. This requires continuous monitoring and prompt referral.

Think about interprofessional collaboration for this case. Provide a list of specialties and other disciplines and indicate what contribution these professionals might make to managing the patient.
MD- performs assessment and plans treatment/management of the patient’s disease. Evaluates effectivity of treatment.
Registered Dietician – Assists patient with diet recommendation.
Radiologist – performs diagnostic tests such as MRI
Audiologist – Performs hearing test and provides recommendation.
Otolaryngologist – if medical treatment does not work may refer to Otolaryngologist for further treatment such as surgical procedure.

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