Vertigo	Referral Guide: Page 1 of 3	ENT

Diagnosis/Definition:

The term "vertigo" is used to describe a subjective or objective sense of movement, often rotary in nature, usually related to a peripheral labyrinthine cause.

Initial Diagnosis and Management:

History: A good history and neurological exam by the primary care physician will often make a diagnosis. Dizzy patients often present with an array of confusing complaints and need help organizing these.
-Vertigo: A subjective or objective sense of movement, often rotary in nature; usually related to a peripheral labyrinthine cause.
-Loss of equilibrium: Often described as "almost falling" or "my balance is off"; the etiology may be abnormalities in the cerebrum, cerebellum, pyramidal track, posterior column, or peripheral system.
-Light-headedness: A feeling often related to quick positional changes; usually a vascular etiology.
-Dizziness: A disturbed sense of relationship to space in which the etiology maybe vestibular, cerebellar, visual, hematologic, or gastrointestinal.

The following information should also be investigated: associated otologic complaints such as hearing loss – progressive vs. fluctuating, tinnitus, aural fullness, otalgia, otorrhea, or facial paralysis, previous otologic surgeries. Head trauma, or noise exposure, medication history and use of ototoxic and/or vestibulotoxic medications, family history of otosclerosis, neurofibrmatosis, etc. Complete medical history to evaluate the possibility of diabetes, hypothyroidism of hyperthyroidism, cardiovascular disease, eye diseases such as cataracts autoimmune disease, and a history of infectious diseases such as syphilis. Central nervous symptoms such as loss of consciousness, seizure activity, confusion, memory loss, peripheral weakness, numbness, dysphasia and double, blurred, or loss of vision. This suggests central disorders that cause vertigo. (Neurology consultation may be appropriate.)
Physical Exam: A thorough neurological, middle ear and gross hearing assessment is indicated. A complete description of the initial and all subsequent episodes in detail, including but not limited to, start of symptoms, activities being performed, duration – continuous or intermittent, frequency, what brings the symptoms on, and symptoms occurring after an attack.
Ancillary Tests: Audiological evaluation.
Initial Management: To determine which of the below listed Peripheral Vestibular Disorders, if determinable, the patient may be experiencing.

Menierre's Disease
-Evaluation: Episodic true vertigo, fluctuating hearing loss (usually lower frequencies), tinnitus in the affected ear (often fluctuation or even crescendo prior to attacks), and the sensation of aural pressure in the involved ear.
-Management: Obtain audiogram if complaints of hearing loss at the time of the visit. May treat vertigo symptomatically. Meclizine, etc. Refer to drug sheet.
-Referral: Elective Otolaryngology referral. Please refer to general medical evaluation. Forward records, labs, EKG, etc. with referral slip.

Labrynthitis
-Evaluation: Viral is the most common form, often preceded by a viral infection of the upper respiratory or GI tract by as much as 2 weeks. Symptoms onset – severe true vertigo exacerbated by head movement. If present, get an audiogram. On neurological exam, ocular nystagmus will be present in the acute phase, otherwise normal neurological exam and ear exam. Severe symptoms last about 72 hours with gradual return to normal balance over 6-8 weeks.
-Management: Symptomatic medications.
-Referral: Otolaryngology referral if the patient has an abnormal ear exam, or hearing loss, or if symptoms last longer than 8 weeks. Please refer to medical evaluation. Forward records, labs, EKG, etc. with referral slip.

Benign Paroxysmal Positional Vertigo (BPPV)
-Evaluation: Onset of true vertigo rapidly brought about by assuming very specific head positions (neck extension with head turned to one side or rolling over to one side in bed). Vertigo lasts 1-2 minutes. No associated hearing loss, aural fullness, or tinnitus. This is very common in the elderly or any age group after mile head trauma. Obtain an audiogram to confirm no asymmetry. Dix Hallpike will often be abnormal, but not always. The dependent ear is the diseased ear.
-Management: Usually self-limited, commonly resolving in 6-12 months. Usually vestibular suppressive medications are not needed.
-Referral: If patient is functionally debilitated or in high risk profession (roofer, painter), or if symptoms persist more than 6 months or if abnormal/asymmetric audiogram, refer to Otolaryngology. Vestibular habituation exercises and vestibular positioning procedures (Eply/Semont) are often helpful. Forward records, labs, EKG, etc. with referral slip.

Initial Diagnosis and Management:

Vestibular Neuronitis

-Evaluation: Controversy exists, is this a neuronitis or a form of chronic labyrinthitis (recurrent or viral infection)? The affected patient is prone to episodic exacerbation with vertigo symptoms unaccompanied by aural pressure, hearing loss or tinnitus.

-Management: Confirm normal audiogram. Symptomatic medications.

-Referral: Usually proceed with Otolaryngology referral due to the recurrent nature of the symptoms after a complete medical evaluation to address the possibility of diabetes, hypo-hyperthyroidism, cardiovascular disease, eye disease, autoimmune disease, or infectious diseases such as syphilis. Please forward records, labs, EKG, etc. with referral slip.

Autoimmune Vestibulopathy

-Evaluation: Progressive bilateral hearing loss often accompanied by a bilateral loss of vestibular function. Other autoimmune mediated disease is often present (rheumatoid arthritis, psoriasis, ulcerative colitis, Cogan's syndrome-iritis, vertigo, and hearing loss). Obtain appropriate autoimmune metabolic tests.

-Management: Must treat the underlying disease process. Steroids, cytotoxic agents, plasmapheresis.

-Referral: Primary referral is to rheumatology. Otolaryngology will assist in evaluation by following improvement of hearing with therapy and confirming absence of any other associated pathology.

Central Vestibular Disorders/Vascular Disorder/Vetebrobasilar Insufficiency (VBI)

-Evaluation: 4 Ds – Dizziness, diplopia, dyspagia, and drop attacks. Rapid onset vertigo with nausea, emesis lasting several minutes. Associated symptoms include visual changes "brown out", drop attacks, visual field defects, diplopia, headaches. May be precipitated by orthostatic hypotension or mechanical compression.

-Management: Full cardiovascular evaluation.

-Referral: Referral to Otolaryngology only if requested by Cardiology or Neurology or if asymmetric hearing loss is present.

Posterior Fossa Migraine

-Evaluation: Caused by ischemia in the distribution of the basilar artery (occipital and posterior temporal lobes). Symptoms include diplopia, tinnitus, vertigo, dysarthria, and rarely, hearing loss. Results from dysfunction of CN III-XII. Sensorimotor signs of weakness drop attacks, paresthesia of extremity or face, even syncope. May be confused with Peripheral Vestibular Disorder since vertigo onset is abrupt, lasting 5-6 minutes. Headache that follows can be mild and Overlooked as a symptom by the patient.

-Management: Detailed history and neurological exam.

-Referral: Referral to Neurology.

Vasocclusive Disease

-Evaluation: Differentiated from Peripheral Vestibular Disorder by presence of associated findings of central injury.

1. Lateral Medullary Syndrome (AICA infarct) – Vertigo, nausea, ataxis, ipsilateral Homer's Syndrome, loss of pain and Temperature to ipsilateral face and contralateral body, ipsilateral palatal, pharyngeal, laryngeal paralysis.
2. Cerebellar Infarct – Severe vertigo, nauseam emesis, ataxia. Distinguishing features are gait and extremity ataxia. Most common in the elderly patient with history of hypertension and vascular disease. Patients complain of imbalance.

-Management: Detailed history and neurologic exam.

-Referral: Referral to Neurology.

Acoustic Neuroma/Vestibular Schwannoma

-Evaluation: Unilateral or asymmetric sensorineural hearing loss, unilateral tinnitus, asymmetric audio discrimination scores, +/- facial numbness or tingling, +/- acute vertigo.

-Management: Proceed with full detailed audiogram, ear exam, and neurological exam.

-Referral: Referral to Otolaryngology if suspect. The Otolaryngologist will order imaging if necessary.

Agents for Vertigo (Use with caution in the elderly).

-Meclizine HCL	25 mg. PO q 6-8 hrs (This is OTC)
-Hydrochlorothiazide	25 mg. PO q day (for Meniere's Disease)
-Phenergan	25 mg. PO qid
-Valium	2 mg. PO qid (usually reserved for severe vertigo, occasionally need doses of 2-10 mg.)
-Reglan	10 mg. PO qid
-Tigan	200 mg. PR q 6-8 hrs (suppository)
-Scopolamine patch	1 patch behind the ear, change q 3 days, prn

Note: Symptomatic treatment may prolong the recovery period.

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Indications for Specialty Care Referral:

Emergent Otolaryngology referrals (24 hours) will be necessary if:
-Chronic draining ear with acute onset severe vertigo (possible cholesteatoma with labyrinthine erosion – requires surgery)
-Acute otitis media with severe vertigo (possible acute suppurative labrynthitis – requires surgery and IV antibiotics)
-Trauma directly to the ear with acute hearing loss and vertigo. Examples: Q-Tip injury to tympanic membranes, acute barotrauma (scuba diving injury), strong valsalva (weight lifting).
Urgent Otolaryngology referrals (48-72 hours) will be necessary if:
-Trauma to the head with acute hearing loss and vertigo (possible temporal bone fracture, usually no immediate surgery, observe to CSF leak).

Test(s) to Prepare for Consult:	**Test(s) Consultant May Need To Do:**
-Audiological evaluation. When appropriate: EKG, autoimmune metabolic studies, ear/neuro Exam.	-Electronystagmography (ENG) -Auditory evoked potentials -Electrocochlography (ECOG)

Criteria for Return to Primary Care:

The patient will be returned to primary care after otologic disease has been ruled out or appropriate therapies have been rendered.

Revision History: Created **Revised**