

Back To Chiropractic CE Seminars ~ Presented by: Dr. Larry Masula, DC, DACBN

6 Hours Neurology: Hints of a Stroke

Learning Objectives & Outline

Objectives

How to differentiate the different causes of dizziness and how to be aware of hints a patient may have a stroke or about to have a stroke.

Hour 1-2

What is a Balance Disorder?

Basic Neurological Principles

- Central Integrative State of a Neuron
- Receptors
- Achieving Plasticity
- Cellular Survival
- Neuronal Activation and Health
- Clinical Application

Vestibular Anatomy

- Middle Ear Anatomy
- Lateral Wall Anatomy and related disorders, Medial Wall Anatomy and related disorders, Anterior Wall Anatomy and related disorders, Posterior Wall Anatomy and related disorders

Vestibular Physiology

- Neuronal Activation and Health, Function an Overview, Basic Vestibular Function, Biophysical Basis of Vestibular Receptor Specialization, Semi-Circular Canals, Ampulla, Otoliths, Activation of the Sensory Hair Cells, Vestibular Nerve Physiology, Labyrinth Vascular Supply, Organization of Vestibular Pathways, Vestibular Nuclei, Classification of Vestibular Reflexes

Hour 3

Differential Diagnosis Should Include:

- Longitudinal Levels of a Lesion
(Receptor, Efferent N., Cord, Spinal Tracts, Brainstem/Cb, Thalamus, Cortex)
- VINDICATE, the model for DDX of a neurological lesion
- Identifying Vascular Lesions
HINT (Posterior Stroke Assessment)
Lateral Medullary Syndrome
AICA Syndrome
HINT examination and Interpretation
- Identifying Infectious Disorders
Otitis Externa, Otitis Media, Chronic Mastoiditis, Intracranial Extension of Infection, Viral Labyrinthitis, Meniere's
- Identifying Neoplastic Lesions
Cerebellopontine Angle Tumors, Acoustic Neuroma
- Identifying - Central vs Peripheral Lesions the Acute Vestibular Syndrome (not BPPV)

Hour 4

Cerebellum

- Functional Concepts
- 3 Phylogenetic Lobes of the Cerebellum
 - Flocculonodular Lobe, Anterior Lobe, Posterior Lobe
- 3 Functional Divisions
- Cerebellar Function
- Clinical Signs of Cb Disease
 - Cerebellar Tests, Videos: Wide Based Gait, Truncal Ataxia, Limb Ataxia
- Cerebellar Testing and Treatment Including Practicum **(30 Minutes)**
 - Cerebellum and Sensory Mismatch, Gait/ Balance, Titubation of head / trunk, Rotated / tilted head, Decompensation of movement testing, Dysmetria testing, Dysdiadochokinesia testing, Dysrhythmokinesia testing, Dysarthria testing, Kinetic tremor testing, Abnormal tone testing, Abnormal check rebound, Cerebellar Therapies (Calorics, Rotational Chair, Eye Exercises)

Hour 5

Examination

- Otological Examination
- Examination of Cranial Nerve 3, Cranial Nerve 5, Cranial Nerve 7
- Anterior Canal, Horizontal Canal, and Posterior Canal Repositioning
- Oculomotor Muscles
- Oculomotor Examination
- BPPV Exam
- BPPV Management / Treatment Including Practicum **(30 Minutes)**
 1. Dix Hall Pike Maneuver
 2. Posterior Canal - Epley Maneuver, Semont Maneuver
 3. Horizontal Canal - Lempert Maneuver, Gufoni Maneuver
 4. Anterior Canal - Reverse Dix Hallpike, Reverse Epley

Hour 6

Vestibular Assessment and Treatment

- Spontaneous Nystagmus and Gaze Holding Nystagmus
- Convergence and Pupillary Constriction
- Conjugate Movement via CFG Assessment
- Smooth Pursuits and Saccades
- Rotational VOR
- Eye Movements Mediated by the Left Cb
- Head Thrust Test
- Skew Deviation and Cover Uncover test
- BESS Test
- Rehab Exercises with Practicum **(30 Minutes)**
 - XO VOR Cancellation Test, X1 viewing, X2 viewing, OPK, Cb Rehab Exercises, Laser Maze, NSI Unit, Metronome, Simon, Gaze Stability - Dots on Wall, Wii