Born Today: Your horoscope is available from the government on a need-to-know basis.
SEIZURE DISORDERS

- SEIZURE = “abnormal behavior caused by an electrical discharge from neurons in the cerebral cortex.”
- SEIZURE = “a discrete clinical event w/ associated signs & symptoms that vary acc. To the site of neuronal discharge.”
- MANIFESTATIONS: sensory, motor, autonomic, or psychic phenomena.
- “Not a disease, but a Sx of underlying CNS dysfunction.”
SEIZURE DISORDERS

- CONVULSION = “the specific seizure type of a motor seizure involving the entire body.”
- EPILEPSY = “syndromes of associated seizure types, EEG patterns, exam findings, hereditary patterns, and precipitating factors.”
SEIZURE DISORDERS

TYPES
- See text.
- Partial, simple, complex, generalized.
- Absence, tonic, clonic, etc.

ETIOLOGY
- PROVOKED.
- UNPROVOKED.
SEIZURE DISORDERS

ETIOLOGY

- PROVOKED-
  1) Insult to the CNS- trauma, stroke, hemorrhage (AVM), tumors.
  2) Metabolic Disturbances- electrolyte disturbances, hypoxia, hypoglycemia, hypocalcemia, uremia, alkalosis, drug withdrawal.
  3) Febrile seizures- esp. in kids; temp > 104°.
SEIZURE DISORDERS

ETIOLOGY

- **UNPROVOKED**-
  - Idiopathic; no identifiable cause.
  - Likely genetic.
  - Most occur in the setting of an epileptic syndrome.
  - Treatment is usually lifelong / chronic, as opposed to provoked seizures in which treatment is aimed at the underlying cause.
DISORDERS OF MEMORY & COGNITION

DEMENTIAS

CHAPTER 53
DEMENTIA

“Syndrome of intellectual deterioration severe enough to interfere with occupational or social performance.”

Disturbances in: memory, language use, perception, and motor skills; may interrupt the ability to learn necessary skills, solve problems, think abstractly, and make judgments.
DEMENTIA

**TYPES**

- Alzheimer’s Disease.
- Multi-infarct Dementia.
- Pick’s Disease.
- Creutzfeld-Jacob Disease.
- Wernicke-Korsakoff Syndrome.
- Huntington’s Chorea / Disease.
ALZHEIMER’S DISEASE

- 50-70% of all dementias.
- 4th leading cause of death in the U.S.
- Increases with age.
ALZHEIMER’S DISEASE

PATHOPHYSIOLOGY

- Cortical atrophy, loss of neurons, esp in the parietal & temporal lobes.

- Accumulation of amyloid plaques and neurofibrillary tangles, resistant to enzymatic breakdown.

- Decrease in choline acetyltransferase, an enzyme required to produce acetylcholine, a neurotransmitter associated w/ memory.
ALZHEIMER’S DISEASE

MANIFESTATIONS

- Insidious and progressive course.
- Short-term memory loss, disorientation, loss of abstract thinking, changes in personality and affect.
- 3 stages.
ALZHEIMER’S DISEASE

DIAGNOSIS

- Dx of exclusion.
- No markers. Dx is clinical.
- REQUIRES:
  - 1) Dx of dementia by a mental status exam.
  - 2) No disturbance in consciousness.
  - 3) Onset between 40 and 90m usually after 65.
  - 4) Absence of systemic or brain disorder that could account for the deficits.
ALZHEIMER’S DISEASE

**DIAGNOSIS**

- Metabolic screening should include looking for:
  - B12 deficiency.
  - Hypothyroidism.
  - Electrolyte disturbances.

- MRI / CT done to R/O other organic brain lesions.
WERNICKE-KORSAKOFF SYNDROME

- From chronic alcoholism. 2 phases:
- **WERNICKE’S DISEASE**- due to thiamine deficiency (Vit B1); reversible; characterized by weakness & paralysis of the extra-ocular muscles; nystagmus; ataxia; confusion; peripheral neuropathy.
- **KORSAKOFF’S DISEASE**- chronic, not reversible; impairment of recent memory; difficulty w/ abstractions; impairment of learning; confabulation; polyneuropathy.
DISORDERS OF HEARING AND VESTIBULAR FUNCTION

CHAPTER 55
TINNITUS

- “The perception of abnormal ear or head noise not produced by an external stimulus.”
- “Ringing in the ears.”
- Also hissing, roaring, buzzing, humming.
- Constant or intermittent.
- Unilateral or bilateral.
TINNITUS

- Can be normal if it lasts for only a brief period and is not troubling.

**ETIOLOGY**

- See text. Exact physiology not clear.
- Impacted cerumen (earwax).
- Noise-induced hearing loss, presbycusis.
- Inflammation / infection of the cochlea or semicircular canals (labyrinth).
- Hypertension, atherosclerosis.
- Head trauma.
- Drugs: aspirin, nicotine, caffeine.
TINNITUS

DIAGNOSIS

- Hx & PE.
- Tests of auditory function if accompanied by hearing loss.
- R/O vascular abnormalities.
VERTIGO

- Review Pg 1344, the vestibular system, peripheral and central vestibular function.
- Involves the illusion of motion. “Spinning.”
- Differentiate from light-headedness, syncope, unsteadiness, “blacking out,” can be caused by postural / orthostatic hypotension.
- Unsteady gait can be caused by lots of stuff: neuropathy, disturbances of sensory input, etc.
VERTIGO

- True vertigo is associated with a disturbance of vestibular function: 85% peripheral (the vestibular apparatus) and 15% central (CNS).
MENIERE’S DISEASE

- A disturbance of the inner ear due to an accumulation of endolymph within the semicircular canals.

- Triad of:
  1) Hearing loss.
  2) Vertigo.
  3) Tinnitus.

- Autonomic Sx’s also present: sweating, pallor, nausea, vomiting.