Vertigo

- Common complain for >75 years old
- Central causes include brain stem, cerebellum or other supratentorial structures (vascular supply)
- Peripheral causes include vestibular, visual and spinal proprioceptive systems

Cervicogenic Vertigo

- disequilibrium from abnormal proprioceptive activity in the cx
- Facet joints in C0-C3 highly innervated by cx proprioceptive input
- Suboccipitals important - supplied with muscle spindles
- Abnormal stimulation of the articular capsule or muscular spindle mechanism receptors can provide conflicting information with visual and vestibular afferents
- Causes sensory mismatch between visual, vestibular and cx mechanoreptors - confuses the brain
- Can be caused by vascular compression and vasomotor changes
- Can be caused by degeneration, inflammation, joint dysfunction, disc lesion, muscle hypertonicity or trauma
- Can be whiplash related
- Stress and anxiety - increases muscle tone and sympathetic firing rate

Presentation

- Patient complains of dizziness with Cx motion + neck pain
- Lightheadedness, floating, unsteadiness, imbalance
- Spinning feeling is not usually present (consider BPPV if present)
- Symptoms ease with a stable position
- Consider non-cervicogenic causes (See notes)
- Diagnosis of exclusion
- Nystagmus (vertical = central origin, Horizontal = peripheral)
- Nystagmus is horizontal, abrupt with head movements and diminishes quickly
- Nystagmus with VBAI has a late onset and intensifies
- Neck torsion test and head rotation to determine CVG vertigo to BPPV
- Slower eye tracking movements when head is turned
- Loss of ROM
- Upper Cx tenderness + restrictions
- Hypertonic subocciptals (can reproduce vertigo on palpation), paracervical, traps, scm and pecs
- Asses for upper crossed or weakness in DNF

Considerations

- Hx of head trauma
- Loss of consciousness (CV and Resp exam)
- Frequent, unexplained falls
- Hearing loss
- Tinnitus
- Ear Fullness (Otoscope)
- Ear Ache (Otoscope, lymphnodes)
- Ptosis
- Facial/extremity paresthesia (UMNL, Cranial nerve)
- Visual disturbances
- Difficulty/speaking/swallowing/walking (blood pressure for VBAI, cerebellar exam (romberg, finger to nose, heel to knee, gait)
- New medication - anti-hypertensives/antidepressants (blood pressure for orthostatic hypotension

Imaging

Not usually needed unless VBAI/CNS pathology is suspected

DDx

- Labryrinthine/vestibular disorders
- Concussion
- Intracranial bleed
- Perilymphatic fistula
- CNS ischemia/stroke
- Neoplasm
- Infections
- Intracranial swelling
- Migraine
- Carotid Sinus syndrome
- Intoxication
- Drug toxicity

Management

- SMT of Cervical and Tx
- If contraindictaions, mobilisation can be effective
- Myofascial release/stretching of suboccipital, SCM, upper traps, levator, pecs
- Postural correction and breathing exercises
- weakness in DNF
- Vestibular rehab exercises (canalith repositioning)
- Ice heat, ultrasouns