Clinical Integration of Osteopathic Manipulative Medicine

Family Medicine – Geriatrics – Dizziness and Balance disorders

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Intro: When working with geriatric patients the common chief complaints differ from those in younger age groups. In the United States, 200,000 patients per year experience a hip fracture; 80% of these fractures occur in those older than age 60. Among the risk factors for a hip fracture is the propensity for elderly patients to fall. The percentage of people who fall each year directly increases with age, leading to 28-35% of those over the age of 65 falling each year. In addition, dizziness is reported to be the most common complaint for patients aged older than 75 years. Vertigo is a symptom of illusory movement in which the patient complains of feeling like she or he is spinning or swaying or that the room is spinning or swaying around them. Both dizziness and general balance problems can be a precursor to these falls.

Patient presentations:

- Dizziness or vertigo
- History of falls
- Balance problems

Differential diagnosis:

Peripheral or Vestibular system dysfunction:
- benign positional vertigo,
- vestibular neuritis,
- Meniere’s disease,
- labrynthine concussion,
- semicircular canal dehiscence syndrome,
- acoustic neuroma,
- otitis media,
- aminoglycoside toxicity, etc...

Central causes include:
- migrainous vertigo,
- brainstem ischemia,
- Chiari malformation,
Clinical pearls:

- The presence of nystagmus suggests that the dizziness is vertigo.
- Patients with unilateral vestibular disorders generally causes them to lean or fall toward the side of the lesion.
- The Barany or Dix-Hallpike maneuver involves moving the patient rapidly from the sitting to the lying position with the head tilted downward off the table at 45 degrees and rotated 45 degrees to one side. This is a key diagnostic test for benign paroxysmal positional vertigo, and has an 80 percent sensitivity for this specific condition. (http://www.uptodate.com/contents/approach-to-the-patient-with-dizziness?source=search_result&search=dizziness&selectedTitle=1~150)

OMM Integration: As a prevention tool, OMM can be used to improve patients’ balance and potentially reduce falls. A recent study on patients aged 65 or older found that an OMM protocol focused on cranial manipulation and vestibular balance control structures decreased the amount of anterior-posterior sway (p=.001). A second study used subjects aged 13-75 who had dizziness for at least 3 months. Any somatic dysfunctions that were found on an osteopathic structural exam were treated with common techniques. These included muscle energy, HVLA, counterstrain, myofascial release, balanced ligamentous tension, and cranial. The amount of postural sway in the subjects decreased immediately post treatment, and it was maintained at 1 week post treatment (p<.001).

Osteopathic Structural Examination: There are no established somatic dysfunctions that are pathognomonic, or specific, for vertigo or difficulties with balance. However, Lopez et al found and treated dysfunctions in the following regions with OMM. Subjects receiving OMM in these regions demonstrated significant reduction in unintentional sway of their body.

- T1 – L5
- Scapulae
- Cervical spine
- Occipitoatlantal joint
- Venous sinuses
- Cranial bones
- 4th ventricle

Treatments options:

- Myofascial to the lumbar region
- Sacral Rock
- Myofascial to the cervical region
- Muscle energy to the cervical region
- Occipitoatlantal and condylar decompression
• Venous sinus drainage
• V spread
• Frontal and parietal lifts
• CV4

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