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OMT Approach to Vertigo and Dizziness

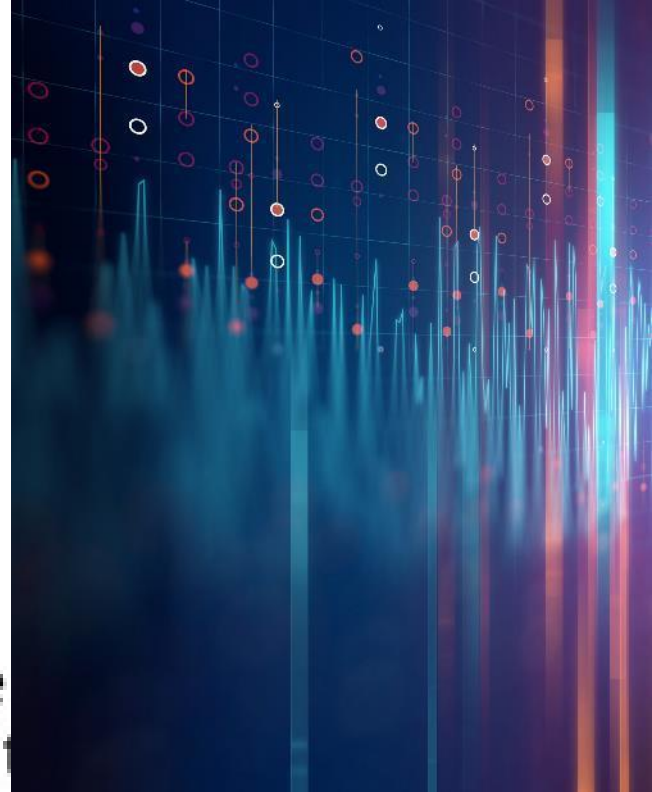
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Introduction

Agenda—Dizziness and Vertigo

Topic one: Dizziness differential and red flags

Topic two: Vertigo

Topic three: OMT Treatment Tips

Topic four: OMT Treatments

Topic five: Revival of old OMT Treatments

Topic six: What We Know Now





Topic one

Dizziness Differential and Red
Flags

Dizziness

the feeling of being lightheaded, foggy or unsteady

Red flags for dizziness

- Head or neck pain.
- Ataxia.
- Loss of consciousness.
- Focal neurologic deficit.
- Severe, continuous symptoms for > 1 hour.

Dizziness differential

Many body systems, including your muscles, bones, joints, eyes and the inner ear, must work normally for you to have normal balance.

The cause of dis-ease may well not be near the location of the symptoms. Even the current research tends to avoid protocols in the choice of Osteopathic Manipulative Treatment techniques utilized to treat these conditions in controlled studies.

CAUSES of Dizziness

- significant drop in blood pressure, such as if you stand or sit up too quickly
- cardiovascular disease
- dehydration
- anemia
- some medicines
- high levels of pain
- exposure to sights you find unpleasant, such as the sight of blood
- high levels of anxiety, hyperventilating or breathing rapidly
- standing up for long periods of time
- abnormalities in your inner ear or a neurological condition, such as Parkinson's disease
- psychiatric disorders
- inflammation of the nerves in your inner ear, migraine, head injury, Meniere's disease, noncancerous tumor or motion sickness
- joint, muscle or vision problems, or nerve damage to your legs, frequently cause feelings of unsteadiness

Topic two

Vertigo



VERTIGO

an overall spinning sensation

less common than dizziness

Dix-Hallpike Maneuver Test for Vertigo (BPPV)

Turn head 45 degrees to one side. Then, have the patient quickly lie on their back, with their head off the side of the table, and maintain the 45-degree head turn for at least 30 seconds. Inspect the patient's eyes and ask if they feel dizzy.

Along with that spinning feeling, you also might have:

- [Dizziness](#) or [lightheadedness](#)
- A loss of balance or unsteadiness
- Unusual or repetitive [eye](#) movements
- A hard time concentrating
- [Nausea](#) or [vomiting](#)

vertigo is a symptom of a medical condition, not a disease

- May be accompanied by nausea, vomiting, sweating and, if infection is the cause, pain or feeling of fullness in ear along with accompanying dizziness; may also have uncontrolled eye movement that stops with fixing gaze (usually early in course of vertigo and resolving in the first few days)
- In labyrinthitis and Meniere's disease, you may have hearing loss and tinnitus
- Vertigo that starts without warning, and stops just as quickly, is more likely to be peripheral vertigo.

Vertigo – 3 main causes:

- I. **Peripheral** (most common type of vertigo) –usually inner ear problem, balance issues generally starting without warning and stopping quickly

Most common types are:

- Benign paroxysmal positional vertigo (BPPV) - (loosened crystals in ear cause dizziness), may be injury related
- Vestibular neuronitis – believed to be viral infection related, sudden onset, lasts 2-3 weeks
- Meniere's disease - dizziness with occasional hearing loss. Uncertain cause, but triggers include stress, eating salt or drinking caffeine or alcohol.

2. inner ear related vertigo (less common cause)

- Labyrinthitis -- caused by a viral infection Perilymph fistula – from head injury or sudden pressure changes, as in scuba diving
- Superior semicircular canal dehiscence syndrome (SSCDS) – from a breakdown of part of a bony part of a canal that carries fluids in the inner ear

3. Central vertigo

- Head injuries or diseases, including illness or infection, Multiple Sclerosis, migraines, brain tumors, strokes/TIA's
- Tend to come without warning, be more intense, and last for long periods of time, especially true of uncontrolled eye movement that will not go away when focus on a fixed point
- Commonly experience headaches, weakness, or dysphagia, but not hearing problems, except in Anterior Inferior Cerebellar Artery (AICA) Infarct

Epley Maneuver for BPPV

First determine which ear is involved:

1. Sit patient on table so that when they lie down, head hangs slightly over the end of the table.
2. Turn patient head to the right and have the patient lie back quickly.
3. Wait 1 minute.
4. If patient feels dizzy, right ear is affected ear.
5. If no dizziness occurs, sit up.
6. Wait 1 minute.
7. Turn patient's head to the left and have patient lie back quickly.
8. Wait 1 minute.
9. If patient feels dizzy, left ear is affected ear.

Epley Maneuver for BPPV left ear (continued)

1. Seat patient on the edge of table. Turn patient's head 45 degrees to the left. Place a pillow so that when patient lies down the pillow will rest between the shoulders rather than under the head.
2. Quickly lie patient down on the back, with head on the table (still at the 45-degree angle). The pillow should be under patient's shoulders. Wait 30 seconds (for any vertigo to stop).
3. Turn patient's head halfway (90 degrees) to the right without raising it. Wait 30 seconds.
4. Turn patient's head and body on the right side, so that patient is looking at the floor. Wait 30 seconds.
5. Slowly sit patient up, while remaining on the table for a few minutes.
6. If the vertigo comes from patient's right ear, reverse these instructions.

Instruct patient to do these movements three times before going to bed each night, until patient goes 24 hours without dizziness.

Prevention of Vertigo

While laying down in a darkened room and taking deep breaths (letting exhale go without effort) can help an acute episode, prevention of vertigo may take the form of yoga (child's position or corpse pose) can help balance, focus, coordination, and movement, but let exhale go without pushing air or pursing lips; hydrate regularly; keep vitamin D levels normal; vestibular retraining (VRT), which is available in Michigan (U of M, for example) and Cleveland Clinic, but others as well

Binocular Vision Specialists can address Vertical Heterophria with prism glasses and PT

See <https://www.webmd.com/brain/remedies-vertigo#1-1> for alternative maneuvers for patients with less neck flexibility (Semont Maneuver), or Zuma Manuever

Zuma Maneuver (treats vertigo)

1. Start in a sitting position.
2. Quickly lie down on the affected side and hold for three minutes.
3. Rotate your head 90 degrees toward the ceiling and hold for another three minutes.
4. Move your body to lie facing the ceiling. Rotate your head 90 degrees, now looking over the shoulder of the affected side, and hold for three minutes.
5. Rotate your head back up to face the ceiling and slowly rise to a sitting position.

Topic three

OMT Treatment Tips

OMT application Force

It has become increasingly important to establish a strong physician-patient rapport, particularly in the age of protocols and displaced eye contact with the patients, as occurs when documentation is done during an appointment. My recommendation is that physicians become very aware of their own listening skills, not only in conversations, but especially in the use of their hands. As soon as hand contact becomes threatening to the patient, the ability of the patient to allow correction diminishes significantly. Listening with your hands requires very gentle pressure to intake information and is very effective in understanding motion present, treatment, and establishing rapport.

Forceful motion is seldom effective

Muscle Energy Techniques (MET) and HVLA seldom require force if the patient is comfortably relaxed enough to allow feather edge localization. Feather edge is not a technique, but rather it is a localization skill. It involves engaging the direct barrier at the very beginning of where it is perceived, rather than jamming the barrier so that it locks. The sensation of force is that of the edge of a feather barely contacting the skin as it is run across the skin. Any heavier force results in guarding on the part of the patient, so the treatment will require more force and the localization is not as precise, so treatment is rendered less effective.

HVLA use of feather edge

Moreover, when more force than necessary is utilized, the application of HVLA requires the Osteopath to readjust the localization during the thrust action: you have to back off enough to be able to produce motion through the barrier. Use of feather edge allows a very gentle thrust through the lesion without the backing off.

I notice more and more Osteopaths who were very good at HVLA are now struggling. It is likely because the level of guarding against touch has increased in our patient population. I recommend setting the patient up as you have always done, but before thrusting, back gently off the barrier about three times, each time engaging the barrier with lighter force, until you can barely feel the barrier edge – then thrust from there!!!

When Force is Welcome

Ligamentous Articular Strain Technique (LAST) does require application of force commensurate with the amount of force that caused the injury. The force must be applied in the exact direction of the force of the injury. Sometimes the force is pushing into the patient; sometimes it is pulling out, depending on the vector (or direction in which the injury occurred.)

Exact localization of the vector of the lesion is imperative. After you get a sense of the vector, apply a tiny circle around the vector to refine your localization (feel resistance or sink in sensation). Use a long lever arm: have your body produce the circle rather than your forearm/hand. This makes localization much easier.



Topic four

OMT Treatments

DIZZINESS RX: The 5-Minute Osteopathic Manipulative Medicine Consult, 2nd Ed, M.K. Channell & D.C. Mason DO (main resource)

Muncie technique (head)

Periauricular drainage technique (head)

Sphenopalatine ganglion stimulation (head)

Cranial strain correction (head)

EXTENDED TREATMENT:

Vagus nerve—OA release (head)

CRI treatment with CV4 hold (head)

MFR, FPR, and/or HVLA (cervical)

Posterior digastric muscle: Counterstrain or direct inhibition (head)

Abdomen/other viscerosomatic—Chapman's reflex for ear

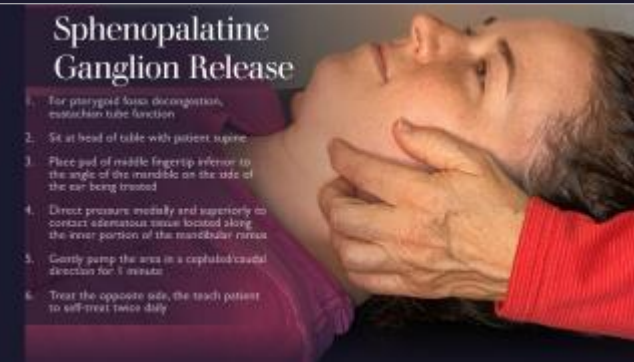
Muncie Technique for postnasal congestion



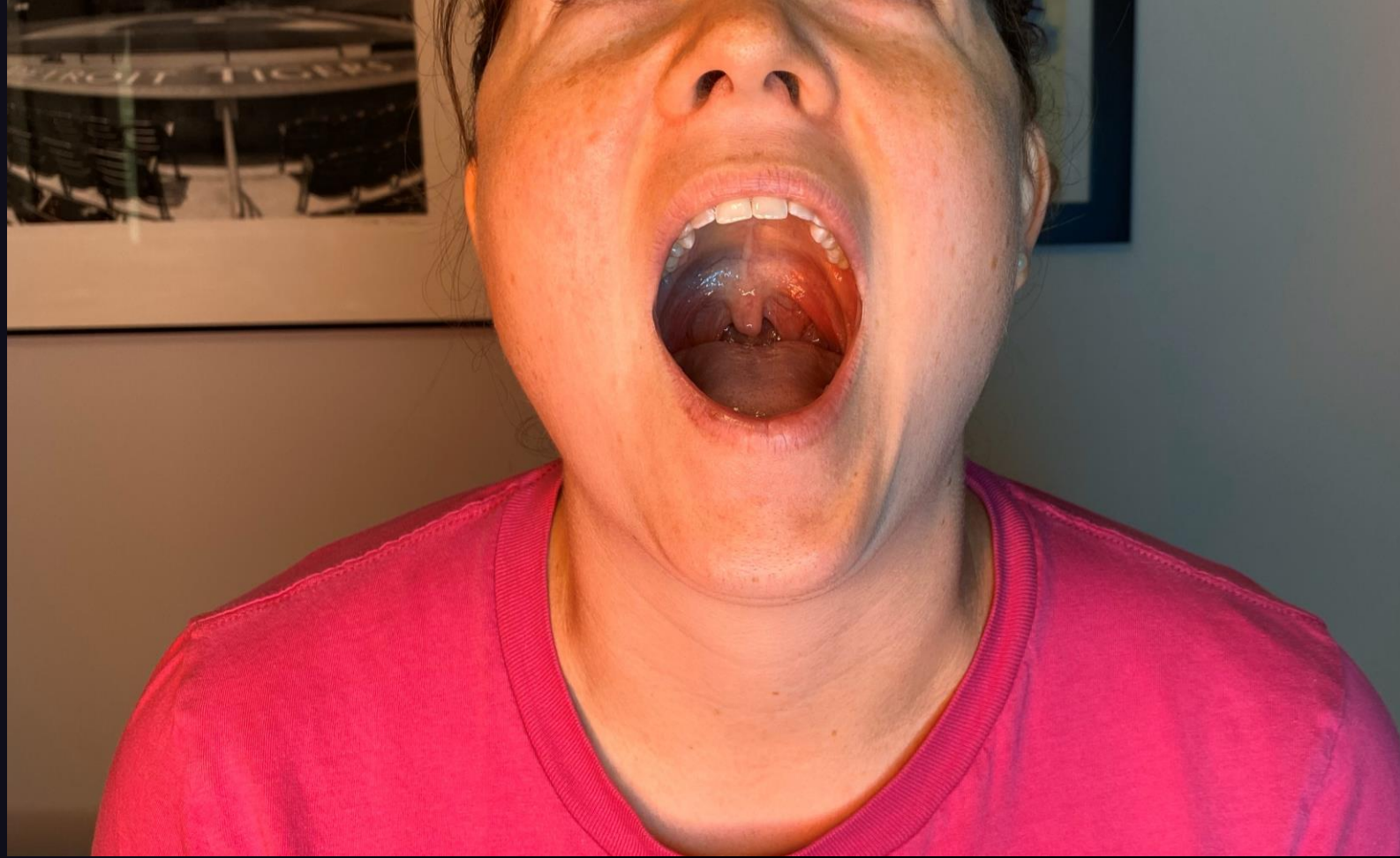
1. Patient seated or supine with physician standing next to patient.
2. Glove operating hand, use index finger to palpate the palatine tonsil region (more lateral than the center of the throat)
3. Apply a gentle lateral pressure in a rotary motion (emphasizing inferior traction) for 15 to 20 seconds. A gag reflex may occur and is alleviated with short quick breaths by the patient

Sphenopalatine Ganglion Release

1. For pharyngeal fossa decompression, eustachian tube function
2. Sit at head of table with patient supine
3. Place pad of middle fingertip inferior to the angle of the mandible on the side of the ear being treated
4. Direct pressure medially and superiorly to contact sphenotemporal suture located along the rear portion of the mandibular ramus
5. Gently pump the area in a cephalocaudal direction for 1 minute
6. Treat the opposite side, the teach patient to self-treat twice daily



For Muncie Technique



Note anterior tonsillar cleft,

Not necessary to sweep uvular area

GENTLE giggling of the soft palate laterally can dislodge heavy mucous buildup

Auricular Drainage

1. Patient supine, Physician standing at side of patient opposite from the dysfunction
2. Place cephalad hand on head to stabilize head
3. Place your hand around the ear, with third and fourth fingers separated
4. Gently apply a clockwise motion to the ear for 10 to 20 seconds and then a counterclockwise motion with just enough force to engage the tissues (also 10 to 20 seconds)



Galbreath Technique

1. Patient supine, physician stands at side of head opposite to the side to be treated
2. Place cephalad hand on the forehead of patient to stabilize the head
3. Ask patient to open mouth slightly, allowing the jaw to slacken tension
4. Place second and third finger pads of your caudal hand on the posterior aspect of the angle of the mandible
5. Apply anterior-medial traction of the mandible for approximately 3-5 seconds
6. Release
7. Repeat step 5, three to five times



Sphenopalatine Ganglion Release

1. For pterygoid fossa decongestion, eustachian tube function
2. Sit at head of table with patient supine
3. Place pad of middle fingertip inferior to the angle of the mandible on the side of the ear being treated
4. Direct pressure medially and superiorly to contact edematous tissue located along the inner portion of the mandibular ramus
5. Gently pump the area in a cephalad/caudal direction for 1 minute
6. Treat the opposite side, then teach patient to self-treat twice daily



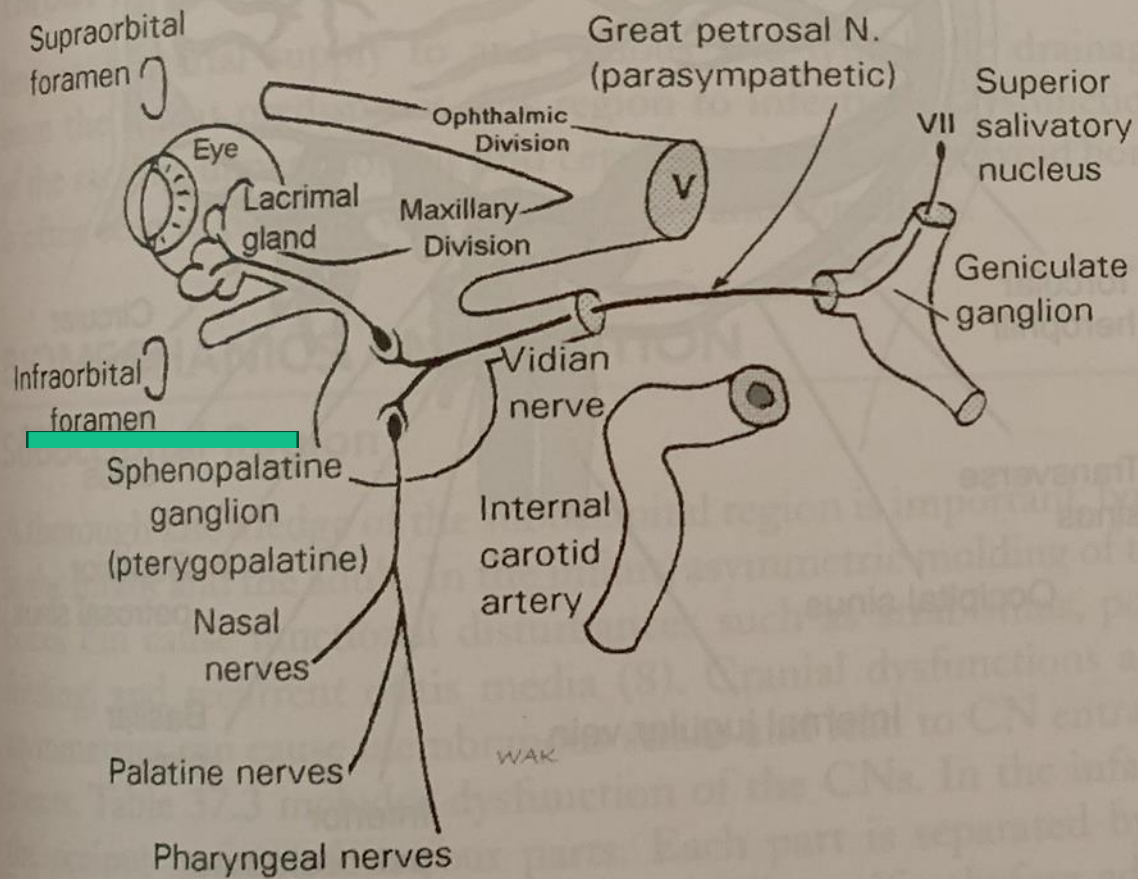


Figure 37-12 Parasympathetic nerves to orbital and nasal areas. (Modified from Kuchera ML, Kuchera WA. *Osteopathic Considerations in Systemic Dysfunction*. 2nd Ed. rev. Columbus, OH: Greyden Press, 1994.)

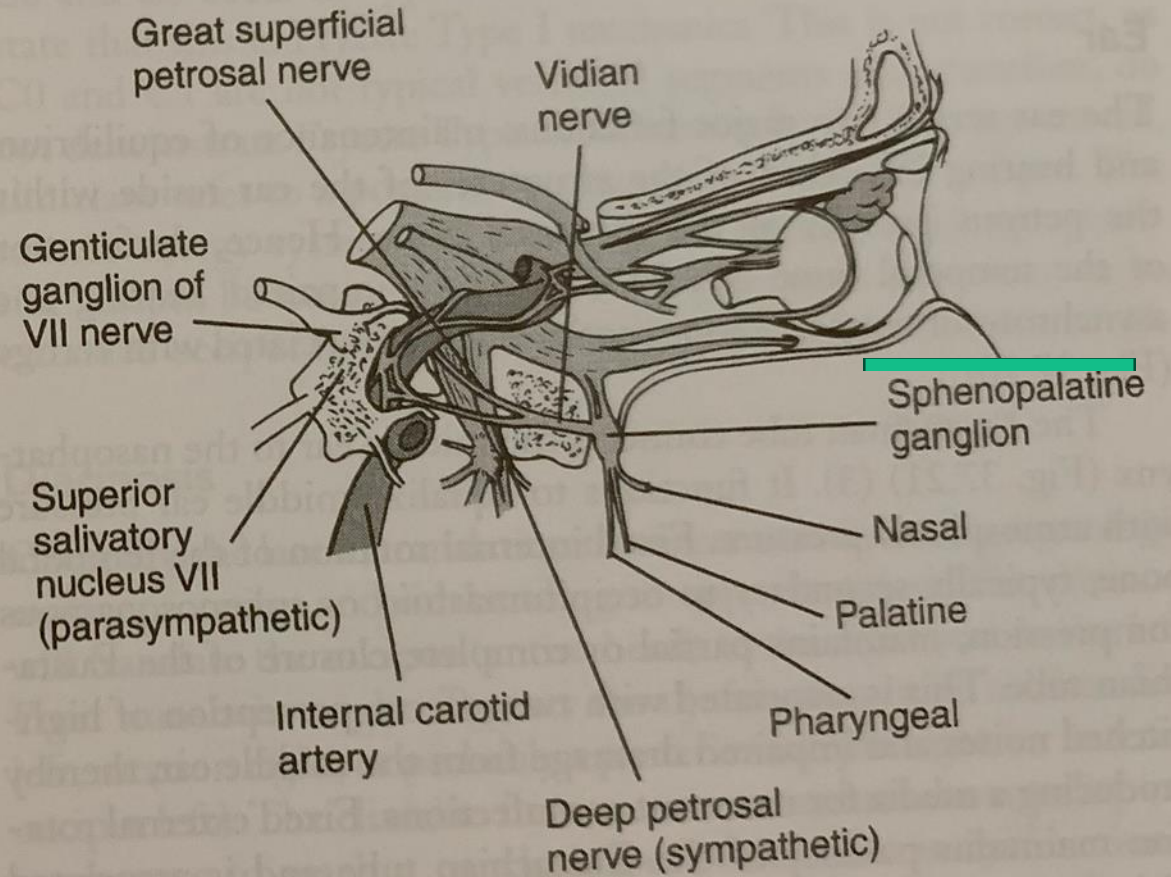


Figure 37-13 Sphenopalatine ganglion. (Modified from Kuchera ML, Kuchera WA. *Osteopathic Considerations in Systemic Dysfunction*. 2nd Ed. Rev. Columbus, OH: Greyden Press, 1994.)

OA release

1. Patient supine with physician seated or standing at head of table
2. Finger pads are placed in soft tissue just below the occipital bone, may require some angle of hands to release tension



OA release slide 2

3. Patient relaxes head into palm of physician's hands
4. Physician uses second to fourth finger pads to engage caudal edge of the occiput keeping head relaxed into palms of hands
5. Let head relax on finger pads until notable softening of the tissues



Alternate OA Release

Alternatively, instead of resting head in mild extension,

Substitute step 5: Traction mildly cephalad until condyles separate from the atlas (C1) with softening of the tissues



CV4 Hand Position

The illustration is one possible CV4 hand position, allowing fingers to support the back of the head and the thenar eminences to contact the occiput



CV4 slide 2

Heels of hands are supporting head, fingers cradle fingers of other hand to allow thenar eminences to reach the occiput just medial to the occipital-mastoid suture



CV4 slide 3

1. Patient is supine, Physician stands or sits at head of patient
2. Cup your hands with fingers overlapping (see above slides)
3. Cradle the skull in your hands with thenar eminences against the occiput just medial to the occipitomastoid suture (you may cup the fingers more into the opposite hand and keep them near the base of the skull if this works better for you), base of skull supported
4. Follow the CRI until extension phase (widening of paired bones in the body), resisting flexion phases by thinking the word "compression" (it does not take much pressure) until the Still Point is reached
5. Maintain Still Point several cycles until CRI smooths out (usually vertically oriented at this point) and then release, but follow the cycle for at least 3 normal flexion/extension cycles



MET for Cervical 2 rotation

1. Name lesion for position it prefers, here C2 is placed into 20 degrees of extension to help localize, but this segment is mainly rotation, so she has rotation right (Rr)
2. Rotate opposite direction (left in this treatment) to feather edge of barrier
3. Have patient turn eyes back to the right for 3 to 5 seconds (easier to control than patient pushing head into resistance)
4. Take up slack, then repeat 2-4 more times
5. Recheck



Neuro Ocular Release for Posterior Digastric Muscle Belly

Faster than Counter strain, uses same trigger points, set up and return to neutral position

1. Patient supine, Physician at head
2. Locate lateral digastric belly trigger point located just under the angle of the mandible on the affected side and place finger on the point, telling patient that the discomfort at that point will be labeled a “10” on a pain scale (to compare with post treatment)
3. Turn head towards side of dysfunction and/or side bend , then ask patient “on a scale of one to ten, how tender is this pain now?” Continue to adjust until patient reports a level of 3 or below





BUG
EYES!

NOR slide 2

4. Now have patient open their eyes as widely as they can, “bug eyes”, showing whites of eyes as much as possible
5. Count three seconds out loud while holding position
6. Passively return patient to neutral position while keeping your finger on trigger point
7. Ask patient “is this point still tender?”



SNS Ganglion Release – Celiac, Superior and Inferior Mesenteric Ganglia, slide 1

1. Locate landmarks:

--caudal end of xiphoid

--umbilicus

- ## 2. Near longitudinal midline between landmarks, feel for firm nodes (firmness indicating SNS stimulated)



SNS Ganglia Direct release, slide 2

3. Gently place pads of fingers over midline, adjusting to cover any firm palpable ganglia and gently meet resistance from tissue until resistance subsides



Abdominal Release (Cranial)

1. Place one hand on abdomen just below costal margin (adjust if another area of the abdomen is more turbulent)
2. Place other hand over T10 area of spine
3. Use gentle pressure to “listen” to the motion between the hands and continue to listen until motion is balanced throughout this space
4. This is the area of largest communication between the front and the back of the body, the front being derived from mesothelium and its umbilicus serving as the life support until birth, the back derived more from ectoderm and containing the brain, but the connection between the front and back of the body is mainly through neurotransmitters



Core Myofascia

In treating patients, keep in mind that much of where the frequency of injury settles in the body is determined by previous gravitational damage. Poor posture and improper exercise technique set the victim of trauma up for worse injuries. Encouraging the patient to lengthen and use the **core myofascia** helps to decrease gravitational injuries, but also helps decrease fatigue, engage the endurance muscles of the body, increase coordination, and improve

BALANCE!!!



Engaging the core

Sit with buttocks behind you and lengthen your abdomen

Do not tense transversely, such as clenching the thighs or pretending that tensing your muscles makes you more productive (this blocks the core)

Elongate your abdomen while sitting, standing, or lifting

(Dog is displaying the way we tend to bend our back and shorten our abdomens, but then he is not sitting or standing up)



If you are not too tired, following is the rationale for more advanced treatment of vertigo and dizziness – based on the part of the training that A.T. Still and Sutherland had a hard time talking about due to bias



Topic five

Revival of old OMT Treatments – basis for consideration

A.T. Still

“As osteopathic machinists we go no further than to adjust the abnormal conditions back to the normal. Nature will do the rest.”

--The Philosophy and Mechanical Principles of Osteopathy, A.T. Still, 1892



A.T. Still

“Before we treat of the head, we must follow blood from the heart to all organs of the head...we must apply a searching hand and know to a certainty that the constrictors of the neck, or other muscles or ligaments do not pull cervical and hyoid bones so close as to bruise pneumogastric or any other nerves or fibres that would cause spasmodic contraction...Undoubtedly all these afflictions have their origin in obstructed normal action between the heart and the termination of all above it, for want of nerve and blood harmony. Pp 43-44 in Philosophy of Osteopathy, 1899.

Other older considerations:

T1-T4 somatic dysfunctions (sympathetic)

Spinal accessory nerve (CN XI) to Sternocleidomastoid muscle

Mandibular trigeminal nerve (CN V3) to temporalis muscle (treat temporal bone Somatic Dysfunction)

Eustachian tube dysfunction, medial pterygoid muscle, masseter muscle, clavicular portion of SCM, cranial strains, especially torsions and side-bending of the cranium, lymphatic congestion of preauricular and postauricular lymph nodes, submaxillary and submental and supraclavicular lymph nodes



Topic two

Dizziness Differential and Red
Flags

Tuesday, February 2, 20XX

Sample Footer Text

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What we know now:

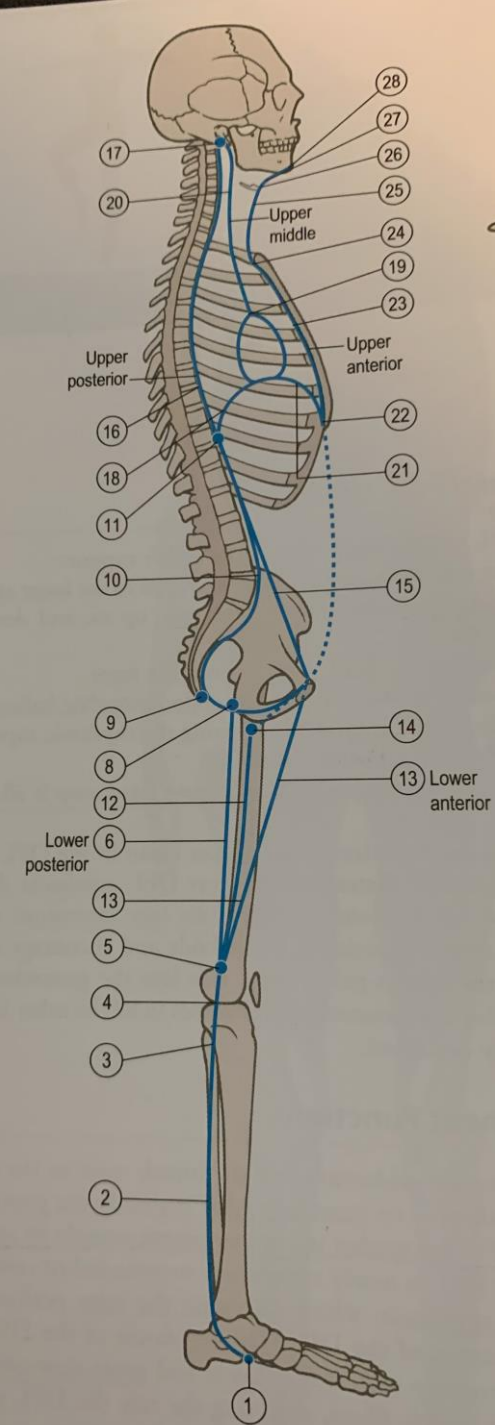
Debated for years, there is lymphatic drainage of the brain. The most compressed region of the body is the cervical region. The largest detrimental injury to the brain caused by neck compression is from compression of the venous drainage, so adding thoracic inlet release and releasing tension in the neck are primary considerations when treating the brain. Note that many of the cervical muscles attach into the upper thorax and furthermore, the deep arm fascial connections pull heavily on the core myofascial, with particular compromise coming from ligaments (and tendons) connecting the clavicles to the manubrium.

The axonal nervous system that we picture does not describe the **perineural nervous system** that transmits the information about injury which allows the body to efficiently heal.

These direct currents of injury are very low level, but they are augmented at certain regions of the body, which allows very efficient and fast transmission of information. The augmentation points appear to correlate with where the major acupuncture points are located.

Many body systems, including your muscles, bones, joints, eyes and the inner ear, must work normally for you to have normal balance.

Especially check entire **core myofascia** as balance and coordination is best when this core is engaged. The picture to the right is from Anatomy Trains, 4th ed., by Thomas W. Myers, p. 148. Of all of the reading I would advise for those serious about performing OMT, this chapter explaining endurance, balance, coordination and muscle memory –yes!





VERTIGO

an overall spinning sensation

less common than dizziness

<https://www.mayoclinichealthsystem.org/>

Summary

Dizziness and Vertigo have many causes. Many body systems, including your muscles, bones, joints, eyes and the inner ear, must work normally for you to have normal balance. OMT may be helpful in many of these cases. However, the OMT approach to dizziness or vertigo needs to be determined by the somatic dysfunction identified.

The cause of dis-ease may well not be near the location of the symptoms.

Thank You for attending!

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“MOA CONFERENCE ATTENDEE” in
subject line;

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