Cranial III: Treatments

Cranial osteopathy can be used to treat common strain patterns that result from fluctuations of the primary respiratory mechanism (PRM). It can also be used to treat a list of common complaints including but not limited to headaches, vertigo, otitis media, TMJ dysfunction, and sinusitis. The goals of cranial osteopathic treatment include normalizing brain and nerve function, normalizing blood, lymph and CSF flow, releasing dysfunctions of the reciprocal tension membrane (RTM), correcting strain patterns, and manipulating cranial structural patterns. Two ways to assess the PRM and cranial bone motion include the Vault Hold and the Fronto-occipital Hold. With light palpation, a physician may use these techniques to sense the underlying motion within the cranium, making note of the amplitude, rate, and regularity of the C.R.I.. One of cranial treatments is called decompression of the occipital condyles. Treating this helps balance out the RTM at the location of the hypoglossal canal, resulting in normalized tone to CN XII. Another technique like Venous Sinus Drainage can be used to increase drainage output from the dural sinuses of the cranium. The CV4, or compression of the fourth ventricle, can be used to improve the inherent motion of the C.R.I.. Here, physicians resist cranial flexion and augment cranial extension. Once a still point is reached, they will reintroduce the inherent cranial flexion and extension motions. Another common technique is the V Spread. This technique is used to operate restrictions over the various suture lines. The Frontal and Parietal Lift can both be used to balance the RTM. Patients treated with a Frontal Lift commonly complain of frontal and sinus pain. Patients treated with a Parietal Lift commonly complain of pain over the squamous suture. Lastly, Temporal Rocking can be used to treat external or internal temporal bone rotation dysfunctions. After performing each technique, it’s important that the physician reassess their findings and note any changes to the amplitude, rate, and regularity of the CRI. Don’t forget, absolute contraindications in treating a patient with cranial techniques include intracranial brain bleeds, increased intracranial pressure, and skull fractures. Those with a history of seizures, dystonia, coagulopathy, and space occupying cranium lesions can be treated based on the risks vs benefits of the physician’s discretion.



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Holds

Vault Hold

Vault Hold

The vault hold is a technique for examining the motion of the cranial bones. In the vault hold, the physician’s hands encompass the cranium. The first digits float above the parietals without touching the cranium. The second digits contact the greater wings of the sphenoid and the third digits contact the zygomatic processes of the temporal bones just anterior to the ear. The fourth digits contact the mastoid processes of the temporal bones and the fifth digits contact the lateral angles of the occiput. The vault hold is an excellent technique for finding SBS somatic dysfunctions, as the practitioner's hands have notable contact with both the sphenoid and occiput.

Fronto-occipital Hold

Front-octopus Hold

The fronto-occipital hold is an alternative technique for examining the primary respiratory mechanism (PRM). In this hold, the physician will gently rest one hand on the frontal bone and the other hand beneath the occipital bone. With light palpation, they may sense the underlying motion within the cranium, making note of the amplitude, rate, and regularity of the CRI. In addition, they may identify dysfunctions and the preferred motion of the frontal, sphenoid, and occipital bones.

Treatments

Decompression of the Occipital Condyles

Decompressed Octopus Cone

Decompressing the occipital condyles helps balance the reciprocal tension membrane (RTM) at the location of the hypoglossal canal. As a result, this will normalize CN XII. Commonly tested on exams is a newborn infant with difficulty feeding due to a tongue dysfunction. With the patient supine, physicians will rest the patient’s head in their palms, with their index and middle fingers directly over the condylar processes. Then, they will apply a slight cephalic and lateral force at the base of the occiput and hold until a release is felt. Once complete, they will reassess their findings and note any changes to the amplitude, rate, and regularity of the CRI.

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Venous Sinus Drainage

Vines Sinner Drain

The venous sinuses drain about 85-95% of the blood from the cranium. As a result, physicians can target the occipital, transverse, and sagittal sinuses to increase drainage output. The order in which you treat each sinus goes: confluence of sinuses, occipital sinus, condylar decompression, transverse sinus, straight sinus, superior sagittal sinus, and lastly metopic suture. This process is repeated in a stepwise fashion until all the sinuses have been treated. One example is treating the transverse sinus. Here, the physician will place both first and second digit fingers across the superior nuchal line. They will apply a slight gentle pressure over the line until a release is felt on both sides of the sinuses. Once complete, they will reassess their findings and note any changes to the amplitude, rate, and regularity of the CRI.

CV4: Compression of the Fourth Ventricle

Compression-by-vice on (4) Fork Vent

Compression of the fourth ventricle is an osteopathic procedure that allows physicians to improve the inherent motion of the C.R.I. In addition, it amplifies the healing process in sick patients and helps them relax during hard times by impacting on the nervous system functions. With the patient supine, the physician will interlace their fingers and gently rest the posterior-medial aspect of occipitomastoid sutures over their thenar eminences. The physician will resist cranial flexion and augment cranial extension. With time, the amplitude of the CRI will decrease until a still point is reached. Then, they will slowly release their resting force and reintroduce normal cranial flexion and extension motion. Once complete, they will reassess their findings and note any changes to the amplitude, rate, and regularity of the CRI.

V Spread

V Spreading

The V spread technique is used to separate restrictions over suture lines. One example is the sagittal suture line. With the patient supine, the physician will cross their thumbs over the sagittal suture slightly anterior and superior to the lambda. Then, they will gently apply a soft force towards the parietal bones, separating the sagittal suture apart. Sometimes, the physician may palpate a sense of softening, warmth, or increase in motion directly under their thumb pads. Once complete, they will continue along the sagittal suture line and repeat the technique until they approach the metopic suture. Lastly, they will reassess their findings and note any changes to the amplitude, rate, and regularity of the CRI.

Frontal Lift

Captain-at-front Lifting

A Frontal Lift can be performed to assist in balancing the RTM. Patients that receive this treatment typically complain of frontal pain or sinus pain. With the patient supine, the physician will place both hypothenar eminences over the lateral angles of the frontal bones and both thenar eminences anterior to the lateral aspect of the coronal suture. Then, they will interlace their fingers over the metopic suture and gently apply a compressive force. This will internally rotate the frontal bones and separate it from the parietal bones. Once the lateral angles of frontal bones move into external rotation, the physician will release the head and reassess their findings, noting any changes to the amplitude, rate, and regularity of the CRI.

Parietal Lift

Pirate Lifting

A Parietal Lift can be performed to assist in balancing the RTM. Patients that receive this treatment typically complain of pain over the top of their head along the squamous suture. With the patient supine, the physician will approach the parietal bones with the fingertips slightly superior to the parietal-squamosal sutures. Without touching the patient with their thumbs, they will cross those two fingers in the air, over the midline sagittal suture, and apply a gentle pressure to each opposing thumb. Applying such pressure will force slight approximation of the other fingertips on the cranium and induce an internal rotation on the parietal bones. Lastly, they will maintain this pressure and lift both hands cephalically until fullness is felt in their respective fingers, signifying external rotation of the parietal bones. Once the parietal bones move into external rotation, the physician will release the head and reassess their findings, noting any changes to the amplitude, rate, and regularity of the CRI.

Temporal Rocking

Temple Rock

Temporal Rocking can be used to treat a patient with an external or internal temporal rotation dysfunction. With the patient supine, the physician will palpate, with one hand, the zygomatic portion of the temporal bone with their thumb and index finger. They will rest their middle finger on the external auditory meatus and rest both index and little finger on the inferior part of the mastoid process. They will use their other hand to cradle the occiput above the table. During cranial flexion, they will apply a medial force over the ring and little fingers with cephalic lifting of the zygomatic arch in order to augment external rotation. During cranial extension, they will simply resist internal rotation of the temporal bone. Once complete, the physician will release the head and reassess their findings, noting any changes to the amplitude, rate, and regularity of the CRI.

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