Cranial Technique in the Neonate and Baby – Video One

Occipital condyle balancing

In my experience, subluxation of the occipital condyles in newborns and infants is very common and when adjusted, can often have a profound effect on the health and well-being of the child, due to the potential impact of the adjustment on the brainstem in a child of this age. There are many ways in which you can influence the upper cervical region of an infant, including both cranial adjusting as well as specific spinal adjusting techniques. I would be remiss here if I failed to mention that there are those within our profession who seriously question the need to adjust the upper cervical region in the infant. The reason put forward is that this input into the brainstem of the child is excessive and unnecessary. I am certainly happy to debate this issue, as I have for many years adjusted the upper cervical spine of infants with great success. However, having an understanding of the neurology of a child this age, I would certainly agree that any adjustment needs to be the minimum amount of force required to effect a positive change. The techniques presented in this chapter to address subluxations at the occipital condyle, I would classify as low force and more specifically as 'cranial adjustments' than 'spinal adjustments'. Spinal assessment and adjustment of the occiput is addressed in a separate module.

Occipital condyle balancing: Technique 1

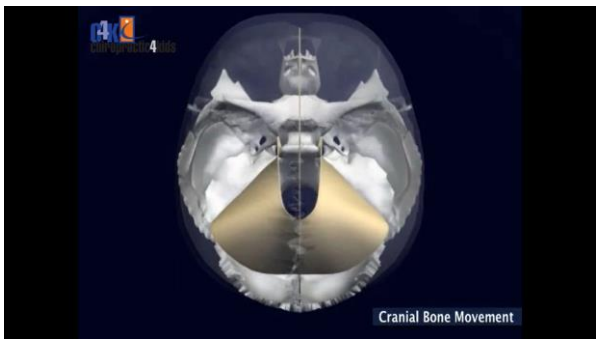
The first technique used to specifically address the balancing and mobilising of the occipital condyles, is essentially a modified motion palpation technique which incorporates a treatment component to it. You should begin by placing your index and middle fingers on the occiput just superior to the atlas, and your thumbs on the parietal bones being careful not to contact the mastoids. While holding the skull lightly, you induce a gentle lateral translation movement of the skull on the cervical spine, checking for movement. When checking the right condyle you should laterally translate the occiput with the chin moving towards the right side. For the left condyle the chin will move towards the left side.

Should a restriction be found, laterally translate the skull, moving the chin towards the side of the subluxation at the same time gently pulling with your ipsilateral index and middle fingers on the occiput to induce head flexion. For example for a left condyle restriction you would laterally translate the skull, the chin would move to the left, and you would gently pull with your left middle and index fingers on the occiput. You then hold this position until the restriction is released. In some cases it may be necessary to induce a very low amplitude impulse designed to ‘gap’ the joint with your index and middle fingers, to completely resolve the subluxation.

Occipital condyle balancing: Technique 2

The second cranial technique used to decompress and correct hyperextension of the occiput on the atlas involves gently cradling the child's head between your two hands. One of your hands supports the occiput and the other the fronto-sphenoid region. Your fingers contact the suboccipital region, with the tips of your finger is aimed towards the occipital condyles. You then hold this position very gently and allow the soft tissues to relax. Once soft tissue relaxation has been achieved, gently traction on the occiput away from the articular surfaces of the atlas, at the same time with your other hand gently encouraging the fronto-sphenoid complex to rotate anteriorly and inferiorly. In other words this hand exaggerates the separation of the occiput on the atlas by inducing a ‘nosedive’ type of movement. The final step in this procedure is, as you feel the occiput moves posteriorly, gently spread your fingers slightly away from each other, which has the effect of spreading the occiput as it is decompressed.

Sutural Release



When you consider the skull as a complex mechanical model, it quickly becomes obvious that the movement of one bone will induce movement in another related bone and by extension of this the entire skull can be regarded to move in response to the initial force. Consequently, should one suture or bone of the skull become restricted in its movement, this then has the potential to create a distortion in the movement of the entire cranial vault as accommodation is made for this localised movement restriction. For this reason, dysfunction in a suture can have a profound effect on the overall structure and function of the craniosacral system.

Sutural work in neonates and babies is designed to balance and align the sutures, which thereby influences the entire cranial system. Through observation, which we have previously discussed, as well as gentle palpation, the practitioner should identify sutural dysfunction such as bulging, depression, ridging and/or movement restriction. The sutures which we will consider here are the coronal, sagittal, lambdoidal, squamosal, metopic and maxillary.

The Sutural Release Technique

The sutural technique which I have adopted with babies involves palpation of all the sutures in a structured and methodical manner. Once I have processed the information obtained through observation and a superficial palpation of the skull, I will then localise my examination specifically to each individual suture.

The procedure begins with palpation of the coronal suture. Using gentle thumb contact on the parietal bone, starting in the midline next to the anterior fontanelle, I will induce gentle pressure in an anterior direction along the medial two thirds of the suture. For the lateral one third of the suture, gentle pressure is directed on the frontal bone from a anterior to posterior direction.

Next I contact the sagittal suture, where gentle thumb pressure directly over the suture is applied, creating a flexion movement into the parietal bones. Please note the pressure used should be very gentle, as this can be quite tender if there is dysfunction present. Also be sure to avoid the anterior and posterior fontanelles.

Once your thumb reaches the lambda, then simply follow the lambdoidal suture as it tracks across to the posterior aspect of the mastoid process. Gentle pressure is directed into the lambdoidal suture, while at the same time your fingers gently flex the occiput.

Following this, I will then work on the squamosal suture. I will mark the anterior and posterior aspects of the suture, and then with gentle thumb pressure work the suture in a superior to inferior direction, as my thumbs gradually approximate each other. It is important to remember the movement of the temporal bone during flexion is a ‘flaring out’ at this suture. An understanding of this movement allows the practitioner to visualise and support this natural cranial rhythm.

When there is maxillary suture dysfunction there may be a widening of the palate, (if there is a restriction in flexion), or a narrowing of the palate, (in a restriction in extension). Gentle pressure should be applied straight superiorly through the maxillary suture, working along the length of the suture to correct movement dysfunction, ridging or bulging. Following this, you should complete this procedure with gentle external rotation on each side of the suture to spread the hard palate.

The V-Spread Technique

The V-spread is potentially a very effective technique which can be used to disengage and hence restore normal function to a suture. The procedure involves placing two fingers of one hand on either side of the suture which is to be released, and then exerting a gentle traction in an attempt to disengage the suture. While you are doing this you place one or two fingers at the point of greatest distance from the suture on the contralateral side. You then exert gentle pressure with these fingers towards the suture. In theory this gentle pressure sends a fluid wave towards the suture. In practice you may feel this fluid wave as a gentle pulse by the two V-spread fingers. This may be perceived as a gentle release or perhaps an apparent softening of the area also.

Skull Moulding

Skull moulding may be of benefit in the infant where there is obvious bulging of the skull in one specific area. The technique involves one hand cupping the area of the skull directly opposite the region where there is bulging or asymmetry. The area is held with the palmar surface of the hand, leaving a slight gap to allow the cranium to mould into that space. You should then gently press directly onto the bulge or protrusion with slow steady pressure over a period of several minutes. The infant will often struggle and attempt to resist this procedure. This is a normal response and should not deter you from completing the procedure. It can be of benefit to also have the parent gently support the child's pelvis as you perform this technique.

Spinal assessment and adjustment of the occiput is addressed in a separate module.