

B. THE UPPER CERVICAL SPINE - SPECIAL THERAPIES.

In this section I wish to deal with two specific conditions. They are "Headaches" and "Vertigo".

1. HEADACHES

Explanation

The treatments for patients plagued by headaches have been of special interest to me for over four decades. However I will confine comments on this subject to my special tests and treatments for this condition, including a "SNAGS" technique that we find useful in restoring a loss of Cervical 1/2 (atlas/axis) rotation. This is often associated with a headache.

If a patient is suffering from a headache of upper cervical origin then one of the mobilisations or the traction to be described should, as it is being applied, stop the pain. They are sustained techniques. I assume that if a headache stops with a manual technique involving the upper cervical spine then this must be diagnostically significant as to the site of the lesion causing the problem and the fact that there is a mechanical component.

The first technique is like the "NAGS" mobilisations already covered but differs in that the top two vertebrae are moved very gently ventrally on the base of the stationary occiput above.

The second is where the occiput is drawn forward on the upper cervical spine.

The third is a form of manual traction, which distracts the upper cervical facets at right angles to their treatment planes.

The fourth as already mentioned is a mobilisation with movement that can restore a loss of Cervical 1/2 rotation.

Descriptions

(1). "HEADACHE SNAGS" . (See Figures 12 a and b)

You stand beside the seated patient. His head is cradled between your body and the right forearm if you stand on his right side. (See earlier description of head position for "NAGS"). The right index and middle and ring fingers wrap around the base of the occiput and the middle phalanx of the little finger lies over the spinous process of Cx 2. (It is prominent and is the first process palpable 2.5cms below the occiput). The lateral border of the left thenar eminence lies over the right little finger. A gentle pressure is now applied in a ventral direction on the spinous process of Cervical 2 while the skull remains still due to the control of your right forearm. The really gentle moving force to do this comes from your left arm via the thenar eminence over the little finger on the spine of Cx 2. The first thing that happens is that the second vertebra moves forward under the first until the slack is taken up, then the

first vertebra moves forward under the base of the skull. This is quietly taken forward until end range is felt and this position is maintained for at least ten seconds. If indicated the headache will lift and you have two ways now to deal with it. The first is for you to manually repeat the “HEADACHE SNAGS” six to ten times. Some patients respond better when the repositioning is sustained for much longer – up to a minute. The second is to have the patient “SELF HEADACHE SNAG”. To secure Cervical 2 place the now familiar hand towel around its spinous process. The patient now glides his head back without tilting it, which will replicate what you the therapist did with the “HEADACHE SNAG”. This is not a strong procedure as excessive muscle activity between the occiput and the spine would be counterproductive. The patient sustains the posterior glide for at least ten seconds and repeats the process six to ten times. They should now feel much better. The technique can be repeated as often as you feel necessary during the day. Remember that the facet planes we are dealing with here lie in an antero-posterior direction and do not slope upwards like their lower relations.

Important. When applying the “HEADACHE SNAG” the good manual therapist will imperceptibly alter the direction of the glide to effect a change. Small adjustments in direction may be necessary as the true facet plane directions vary with individuals.



Figure 12a. “HEADACHE SNAGS”



Figure 12b. “SELF HEADACHE SNAGS”

“Woolly head” sensation. If patients experience what they describe as a woolly sensation in the head after an upper cervical manipulation **“HEADACHE SNAGS”** should be used. They will often, after a few repetitions, rid the patients of their distress.

(2). “REVERSE HEADACHE SNAGS”. (See Figure 13)

The patient is seated with the head held in the manner described previously, except that the right little finger is wrapped around the base of the occiput and makes no contact with the cervical spine. The thumb and index finger of the left hand wrap around Cervical 2 so that the web between them is in contact with the posterior part of the neck. The spine is thus held securely. The grip should be comfortable and care taken not to “throttle” the patient. While the upper cervical spine is stabilised in this manner, the head is taken forward on the column to end range and held there for at least ten seconds. In moving the skull you must not tilt it to ensure that the facet planes remain parallel. If this technique is indicated the headache will go and several repeat mobilisations should be undertaken. As you will have noted this technique is the reverse of the previous one. A Sydney colleague suggested, when I was teaching there, that the same effect could perhaps be achieved by the patient by wrapping a towel around his occiput to stabilise it, and then glide his neck posteriorly. I would agree. It can also be done using the headrest in the car while driving. Self **“FIST TRACTIONS”** are often useful when patients respond to **“REVERSE HEADACHE SNAGS”**.



Figure 13. “REVERSE HEADACHE SNAGS”

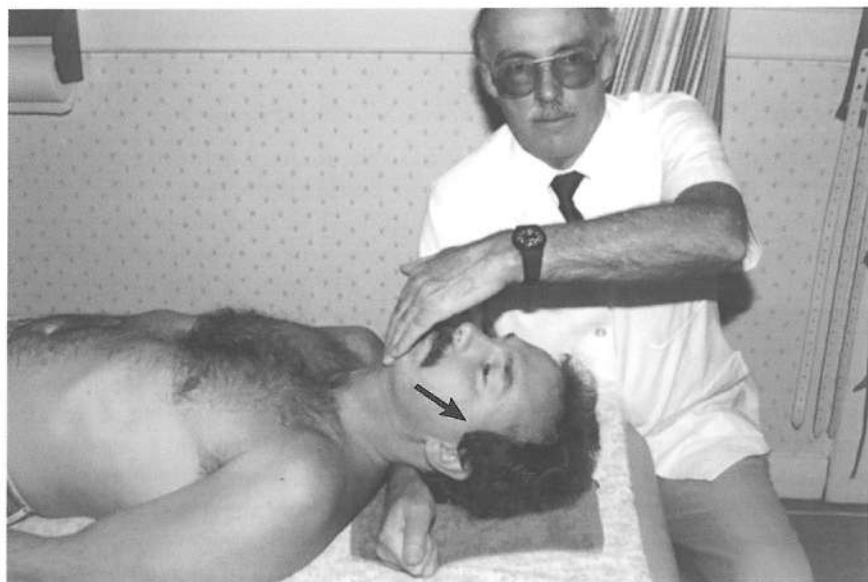


Figure 14a. Upper cervical traction. Test and treatment.

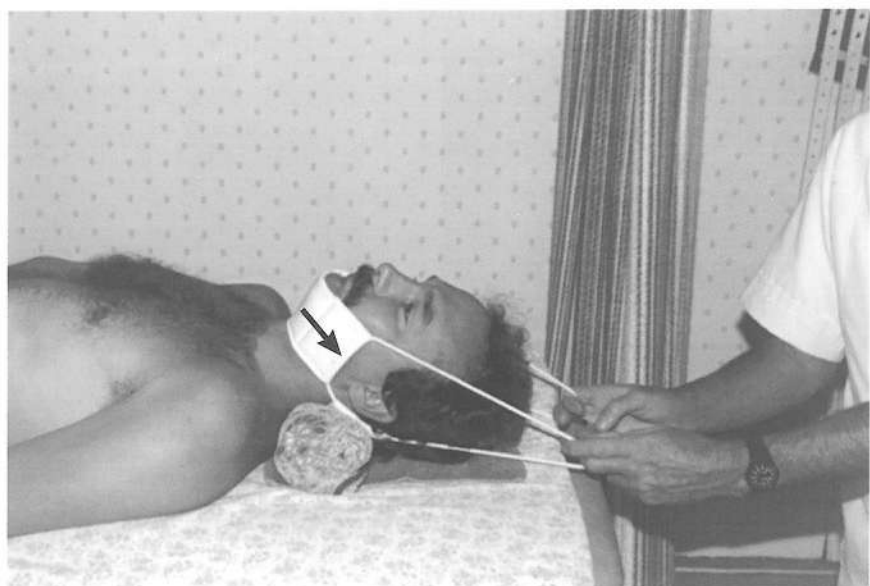


Figure 14b. Upper cervical traction in extension with harness. Test and treatment. Note rolled towel.

(3). UPPER CERVICAL TRACTION (See Figures 14a, b and c)

For many headaches, that are the result of a biomechanical problem in the upper cervical spine, traction in slight extension is one treatment of choice. Remember when dealing with facet joints any traction being applied must take place at right angles to the treatment plane. The testing technique to be described complies with this rule when applying a distraction to the atlanto-occipital and atlas-axis joints.

The patient lies supine and you place the lower section of your right (or left) forearm under his cervical spine so that the ventral border of your radius is tucked under the base of his occiput. If you have a small forearm, or perhaps the patient is large, you can place a narrowly folded towel under your arm to raise it a little. Now place two fingers of your other hand under his chin. To apply traction pronate the forearm tucked under the occiput, while delivering an equal pressure under the chin with your fingers. The effect will be a distraction of the upper cervical joints while the natural lordosis is maintained due to the positioning of the forearm. Hold the traction for at least ten seconds and see if the headache goes. Very little distraction is needed and care must be taken to ensure that the occipital and chin forces equate or the head will tilt and the desired effect will be lost. Experience has shown me that over 90% of headaches of upper cervical origin that I see, cease while this type of traction is being applied. On this basis alone it is worth trying. When effective it is

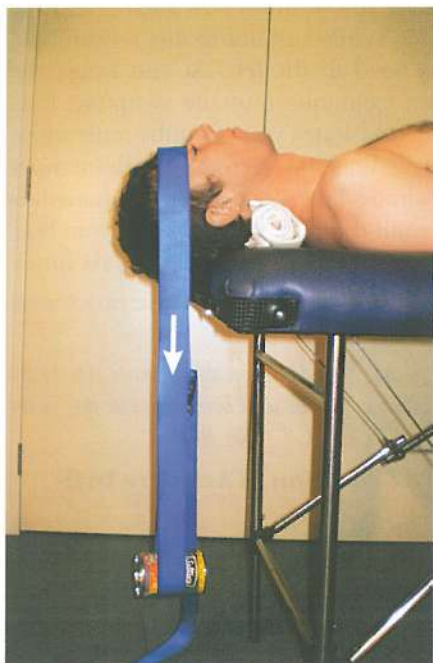


Figure 14c. "Fruit can" Traction

easy to set up a sustained traction treatment using a cervical harness, a small weight and supporting the lordosis with a rolled up towel (see figure 14b).

A colleague on a course in Queensland said that she found another way to distract. The patient lies supine with a rolled up small towel under her neck to maintain the lordosis. The back of the skull is at the edge of the bed so that when a looped belt lies over her forehead it lies vertically. Into the loop is placed a can of fruit or weight of about 500g.

Lying in this way, the upper cervical spine is slightly distracted (traction) and a form of "HEADACHE SNAG" takes place. Some patients love this type of therapy and can replicate it at home with some assistance.

(4). "SNAGS" for restricted Cervical 1/2 rotation. (See Figure 15a)

This technique can be extremely useful in restoring upper cervical rotation and especially when manipulation is contraindicated or the therapist does not have manipulative skills. Most patients can be taught to "SELF SNAG" which is a bonus. These days a "SELF SNAGS" is my treatment of choice.

The patient is seated and you stand behind him. Let us assume he has lost left Cervical 1/2 rotation. You place the pad of the terminal phalanx of your right thumb as far laterally as you can on the transverse process of Cervical 1 on the left. This is large and readily palpated just below the level the ear lobe. Your left thumb is now placed over your right. Your other fingers lie over the mandible on each side to stabilize the head. Your thumbs now glide gently the transverse process ventrally to reposition. While sustaining this repositional glide have the patient slowly rotate his head to the left. At end range the patient supplies some overpressure. The technique must be symptom free. (Avoid flexion or side flexion). As the head rotates your thumbs must move around with it to remain on "target". Do not linger in full rotation. Remember that the treatment plane at this level is almost horizontal when the patient is seated. Thumb pressure is not released until the neck returns to the mid line. On day one only repeat two times and reassess. On subsequent visits six times. If this did not work then you would "SNAG" the Cx1 transverse process on the right with rotation to the left.

I should point out that from experience I have found "SNAGs" on the opposite side to the restriction more effective in 90% of patients which is just as well because when this is the case the patient can be taught to successfully "SELF SNAG". (See Below)

(5) "SELF SNAGS" for Cervical 1/2 rotation. These are brilliant!

For these a small towel is required as was the case with the other cervical joints already dealt with. The selvage on one side is placed around the back of the neck immediately below the occiput so that it lies over Cervical 1. (As a guideline, level with the tip of the ear lobe and just below the nose.) For left

rotation the patient holds the end of the towel on the right with his left hand and the end of the towel on the left with his right hand. Hook the bent right elbow on the back of a chair. The left hand should lie above the right. As the patient turns his head to the left his left hand assists Cervical 1 to rotate by pulling it round. (See Figure 15b). It must not hurt, cause nausea or giddiness and the head must remain erect. (OPTP in the USA make a neat adjustable neck harness for this purpose. It is shown in the illustration 15c).

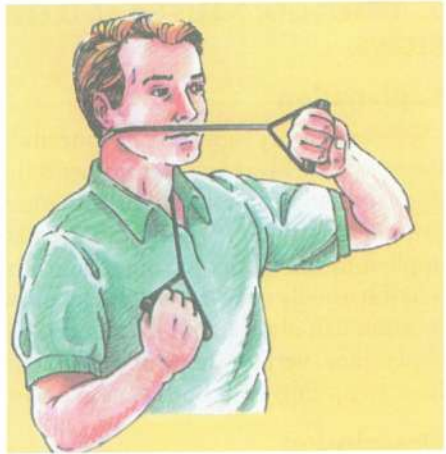


Figure 15c. OPTP harness for "SELF SNAGS"

At this stage the patient gets his partner to apply overpressure to the movement. The over pressure should produce no discomfort. On day one, in my rooms, I would only do this twice and reassess. If it proves successful the patient can be instructed to repeat sets of six frequently during the day or as you think fit. If sore, reposition the towel to check if the placement of the towel was the problem. By repositioning I mean raise or lower it just a few millimetres.



Figure 15a. "SNAGS" for restricted rotation at cervical 1/2

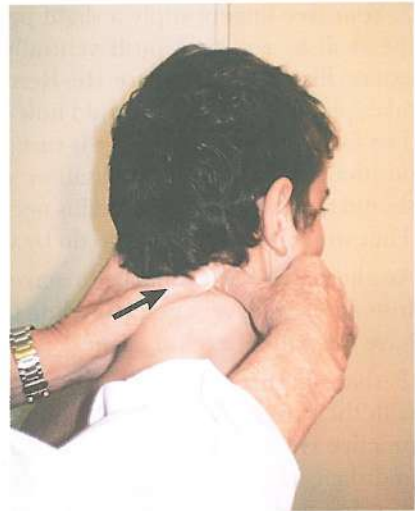


Figure 15b. "SELF SNAGS" for restricted rotation at cervical 1/2

2. VERTIGO, NAUSEA AND OTHER “VERTEBRAL ARTERY” SIGNS.

Explanation

“Vertebral artery signs” are a contraindication to manipulation and all manual therapists are aware of the protocols that exist to test for these signs. However there are simple mobilisations with movement that you can do which will often bring about a safe resolution to the patient’s problem. This treatment is only applied to the vertigo or other signs that are produced with neck movement and it is usually neck extension that most commonly causes giddiness. However rotation can also be a problem as can flexion. I have yet to see a patient that experiences vertigo etc. with both left and right rotation even though they may have symptoms with both flexion and extension movements.

Description

Before the treatment is tried you must ensure that you have the full co-operation of the patient. He will be asked to move his head in the direction that produces his symptoms, provided that with mobilisation this movement is symptom free. He STOPS the movement if it produces giddiness or other “vertebral artery signs”. As with all “SNAGS” techniques they are only used if they are symptom free. If you follow this rule you will never exacerbate a patient’s condition. (r 17)

Giddiness with neck extension

Stand behind the seated patient. Place the palmar aspect of the distal phalanx of one thumb reinforced by the other over the spinous process of Cervical 2. Your free fingers apply a slight pressure to the sides of the face to stabilise the skull as you now push ventrally on Cx2. Now have the patient slowly extend his neck. (See figure 16) Remember to tilt with them as the movement takes place. The patient should now be able to extend his neck, symptom free. The forward thumb pressure is sustained until the neck returns to the starting position. Repeat the mobilisation with movement two times. The patient should now be able to extend his neck without experiencing vertigo or nausea. That would be all you would do by way of manual therapy on day one.

An alternative way would be to make use of the “headache SNAG” procedure. Instead of very, very gently gliding Cx 2 forward do so more firmly and then have the patient extend his neck provided he is symptom free.

(Perhaps in this text it should be mentioned that patients who have problems with their necks in bed should be supplied with a soft collar to sleep in. In my practice we advise patients to fold an empty pillow case in half lengthways and then into three so you have long narrow scarf. Wrap it around the neck securing it with a safety pin. It is amazing how effective the pillow case collar is).

If the patient is reasonably intelligent you must show him how to “SELF SNAG” his neck so that the treatment can be repeated should this be necessary. The procedure with the small towel is the same as for a loss of neck extension. Keep the towel parallel with the upper jaw as he/she moves into extension, because of the treatment plane. Some patients only require one treatment, others may require three or four but when this technique is indicated and used the patient always makes a rapid recovery.

Rotation giddiness

If left rotation is the offending movement you have two thumb positional choices.

- (1). Place your left thumb reinforced by the other, on the transverse process of Cervical 1 on the left side. The same placement as shown in figure 15a. It is easy to palpate just below the ear lobe. Before the patient rotates in the offending left direction you push the process minimally forward with your thumbs, being mindful of the treatment plane. Now the patient turns his head to the left slowly provided no symptoms appear. If symptom free he applies overpressure. After one or two “SNAGS” he should feel much better. More “SNAGS” would be given on any subsequent treatment sessions should they be required.
- (2). Repeat the left rotation with your thumbs on the right side.

I have found that when the patient has ‘vertebral artery signs’ with rotation, thumb placement on the offending side has been the most successful.

Remember that visual disturbances associated with neck movement can also respond to these techniques.

Do these techniques work? See reference (r 18) for scientific proof.



Figure 16. “SNAGS” for nausea or vertigo with extension

C. THE LUMBAR SPINE (“SNAGS” & “SELF SNAGS”)

1. “SNAGS”

Introduction

“SNAGS” in the treatment of the lumbar spine added a new dimension to my therapies for this area. They have proved so exciting to use when indicated and because of this some theorising became inevitable when wondering how a procedure can be so useful. However we all know that it is unwise to print one’s theories because if they can be faulted the author’s credibility is questioned and any valid treatment claims made could be cast aside. Anyway the reader may find my following comments of interest.

Different manual therapy schools of thought have thrived through the decades with their respective followers and this has bothered those of us with orthodox minds. We read of facet theories, disc theories, muscle theories and so on. Today gaining scientific acceptance is the McKenzie treatment approach, which fits in so neatly with the disc theory. Up until now one thing has always puzzled me about the disc theory. This has been the fact that a simple facet manipulation can sometimes bring great relief to a patient that we ‘know’ has a minor disc lesion. I will now offer one hypothesis, which, I feel, ties in facet hypomobility with disc involvement. It explains why “SNAGS”, which I believe work directly on facet joints, can help a disc lesion and certainly assist with the response to a McKenzie or other routine. These remarks definitely pertain to the lumbar spine.

During normal flexion of the spine the disc distorts and becomes wedge shaped. The vertebral bodies proximate ventrally and separate dorsally. The nucleus (or whatever) moves posteriorly, but the disc whose volume is unalterable, remains under the umbrella of the vertebra above. (See figure 17). For this to occur the facet joints must be mobile. If the facet joints are hypomobile, when flexion takes place, the vertebral bodies will be able to proximate anteriorly but unable to separate dorsally. The disc may no longer remain under the umbrella of the vertebra above and instead bulge posteriorly causing symptoms. These symptoms would all be a matter of degree. If there was a weakness in the posterior wall of the disc then even greater problems would arise from facet hypomobility. Yes, I am implying that back pain arising from the disc pathology can be influenced by hypomobile facet joints. When you have a patient, who has pain to the lateral lower leg with spinal flexion in standing, and you “SNAG” him, and while doing so his leg pain disappears when he flexes, you will probably support my hypothesis.

As with all techniques an explanation must be given to the patients. This is really important in the lumbar spine, as a lack of understanding could lead to an exacerbation of their pain and without their co-operation the procedures will not work. You tell patients that you are going to move a vertebra with your