Authors: Dr L Thomas, Dr D Shirley, Prof D Rivett

Clinical guide to safe manual therapy practice in the cervical spine (Part 2)

High velocity manipulation techniques

AUSTRALIAN PHYSIOTHERAPY ASSOCIATION

Manual therapy procedures have proven efficacy in relieving neck pain and can make a significant contribution to the management of individuals with neck pain disorders as part of a multimodal management regime. Nevertheless, there are situations where high velocity manipulative thrust (HVT) techniques are contraindicated.

Manipulative techniques (HVT)

Look out for these features

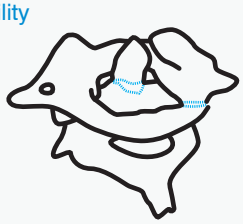
Patient history
Ensure that there are no features of concern in the presentation or medical history that would contraindicate high velocity manipulative procedures:

Vascular
- Suspected cervical arterial dissection (CAD) or risk of CAD
- Vertebrobasilar insufficiency (VBI)

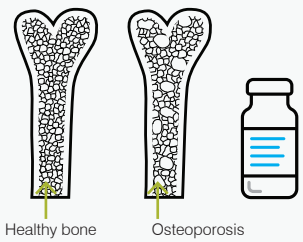
Medical conditions
- Malignancy – primary, or secondary metastasis
- Inflammatory and infective arthritides
- Advanced diabetes
- Haemophilia
- Connective tissue disease eg, Ehlers-Danlos syndrome
- Conditions requiring long term use of steroids; anticoagulant medication
- Cranio-vertebral anomalies eg, congenital absence of odontoid or congenital fusion
- Deteriorating neurological status

Musculoskeletal states
- Advanced degenerative disease: lateral and/or spinal canal stenosis with or without neurological signs
- Recent major trauma that may have compromised structural integrity (fracture; subluxation) eg, motor vehicle accident, sport, fall (especially in older persons)

Upper cervical spine fracture or instability



Reduced bone integrity



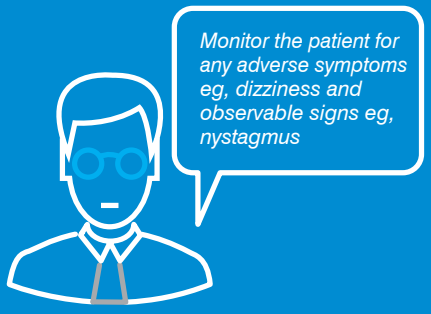
Recent major trauma which may have compromised structural integrity

- Segmental instability eg, traumatic or degenerative instability
- Previous spinal surgery
- Marked muscle spasm around the neck
- Bone disease eg, osteoporosis, osteopenia

Consider additional precautions for manipulative procedures:
- Pregnancy and post-partum period

Mobilisation techniques

Be aware that some passive mobilisation and other techniques (eg, SNAGs) have the potential to compromise the cervical arteries and the clinician should be regularly monitoring the patient for any adverse symptoms or observable signs



Thomas, L, Shirley, D & Rivett, D (2017) Clinical Guide to Safe Manual Therapy Practice in the Cervical Spine, www.physiotherapy.asn.au/cervicalspine

Pre-manipulative procedures

Clinicians should rely primarily on information from the patient history to inform their clinical judgment about whether the proposed treatment is appropriate in the context of the patient's presentation. Positional testing may provide additional information about the effect of the proposed technique on the cervical vascular system.

Physical examination

Perform VBI positional testing monitoring for any adverse signs or symptoms:

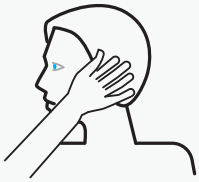
Sustained rotation in sitting (or supine lying)

- Sustain for at least 10 seconds
- Wait 10 seconds in neutral between sides (latency)

Treatment test position (hold for minimum of 10 seconds)

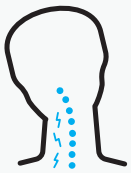
- Monitor for any adverse signs or symptoms
- Is there any spasm or lack of end-feel?
- Is the patient feeling well, comfortable and relaxed?

Sustained rotation in sitting for at least 10 seconds



Is the patient feeling well, comfortable and relaxed?

Is there any spasm or lack of end-feel?



Cease testing

If symptoms are not settling within seconds or getting worse, stop testing. If you have any reservations at all it is prudent not to proceed with HVT on that day and monitor the patient. Consider whether manipulation is appropriate on another occasion.

Obtain informed consent (see below)

Manipulation considerations:

- use minimum force
- avoid end-range positions for the neck
- it is advisable to avoid using rotation thrust techniques in the high cervical spine
- consider a trial of mobilisation to first determine response to manual therapy

Informed consent process

Check patient has understood and gives consent to proceed

Statement/explanation to patient

- What the proposed treatment involves
- Discuss the potential benefits and risks of the proposed treatment in the context of their presentation and patient's circumstances
  - risk may be minor and transient (eg, increased pain), or rarely, serious (eg, stroke or other neurological compromise or death)
- Alternatives to the proposed treatment discussed

Follow-up

- Enquire whether the patient has any specific concerns
- Give an opportunity for the patient to ask questions and address concerns
- Check the patient has understood and gives consent to proceed
- Record in patient notes

Record in patient notes

The information provided is general in nature and is not intended to be relied upon as, nor be a substitute for, specific legal advice.

Dizziness - other considerations

This document has focussed on vascular causes of dizziness or unsteadiness that might be associated with neck pain disorders. However, these causes are relatively rare.

More common causes of dizziness, light-headedness or unsteadiness that may (or may not) accompany neck pain include:

- Cervicogenic dizziness may be associated with neck pain, whiplash and or concussion due to altered cervical afferent input to the sensorimotor control system
- Vestibular
  - Central eg, vestibular migraine, mild traumatic brain injury/ concussion
  - Peripheral eg, benign paroxysmal positional vertigo (BPPV), Meniere's disease, acoustic neuroma or labyrinthitis

Consider other causes of dizziness

- Orthostatic/postural - sudden drop in blood pressure related to change in body position
- Medication side effect
- Anxiety disorders, psychopathologies

For further information about differential diagnosis of dizziness go to: physiotherapy.asn.au/cervicalspine