

## Manual Therapy and Cervical Arterial Dysfunction, Directions for the Future: A Clinical Perspective

This paper is an excellent review article pertaining to the arterial system and manual therapy of the cervical spine (CMT). Clinicians are reminded to consider the cervical arterial system as a whole and, through a careful history and neurological assessment, be alert to signs and symptoms of central nervous system pathology. Also, the process of clinical decision making during CMT is not based on the results of any single test, but on the clinical picture created during the history and examination. The clinician should look for signs and symptoms that contraindicate manual therapy and those that do not fit the model of a musculoskeletal disorder. The authors also raise the familiar concern of manipulative therapists; the presence of risk of vascular injury with cervical manipulation or high velocity techniques, and the difficulty quantifying the risk.

However, this paper raises some clinical questions. Bear in mind that the vast majority of patients presenting for treatment, in the absence of contraindications found during evaluation, will have mechanical neck pain with or without headache, conditions that are perfectly amenable to manual therapy. What level of treatment caution must we exercise? Should we not mobilize or apply mechanical traction to any patient with risk factors for atherosclerosis but no contraindications found on examination? Should we apply the same level of caution about oscillatory mobilizations that we might to high velocity techniques? Clinicians may be prudent to refrain from high velocity techniques in patients with obvious risk factors for atherosclerosis. Nevertheless, the bigger dilemma remains: arterial intimal tears and death have occurred in relatively young people with minimal atherosclerotic change. To date, there is no clinical test to indicate the presence of an artery susceptible to tear.

I also question the clinical value of routine blood pressure screening in addition to the customary history and examination prior to CMT. If this is performed, how is the clinician to interpret the result and what action should be taken? Do we withhold manual treatment of any sort from a patient with elevated blood pressure? A patient may have an elevated reading for other reasons (e.g. pain). More guidance and evidence for inclusion in our manual therapy practice would have been beneficial.

We must use sound clinical judgement and do no harm when performing CMT. I raise these questions so that we do not create unreasonable concern and shy away from effective management of cervical spine conditions. We should remind ourselves that manual therapy and exercise interventions are used with positive results for patients, including those taking antihypertensive and cholesterol lowering medication.

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