

RCC Research Bulletin

Cervical Artery Dissection and Cervical Spinal Manipulation

The RCC's Research Committee has highlighted a recent review article from the American Heart Association Stroke Council (Biller et al, 2014) that provides a scientific statement for healthcare professionals of the current state of evidence on the diagnosis and management of vertebral and carotid artery dissections and of their statistical association with cervical manipulative therapy.

The article, published in *Stroke*, was produced by a multidisciplinary writing group that included a chiropractor. The article, which can be accessed in full here [makes important reading for any chiropractor](#) as it provides the most up to date evidence summary for cervical artery dissections, that includes:

- The incidence, aetiology and pathology of cervical artery dissections
- A comprehensive list of risk factors that should be considered during pre-treatment screening
- Characterisations of the signs and symptoms that may be present in a patient in whom either a vertebral or a carotid artery dissection is underway
- Information on diagnosis and investigations
- Information on medical management, clinical outcomes and prognosis

In relation to the association between cervical manipulative therapy and cervical artery dissection, it is acknowledged that this may be performed by chiropractors, osteopaths, physical therapists or allopathic medical professionals. Evidence relating to the biomechanics of cervical manipulation and possible mechanisms of cervical artery dissections is reviewed. The article critically reviews the findings of case-control studies, concluding that:

- A few studies suggest an association between cervical manipulative therapy and cervical artery dissection, but did not distinguish whether thrust techniques were involved.
- The best available evidence suggests cervical artery dissection, particularly vertebral artery dissection, may be of a low incidence but could be a serious complication of cervical manipulative therapy
- A single study reported a similar association of vertebral artery dissection with chiropractic visits as with primary care physician visits, thus the association may not be causal
- Increased education of providers of cervical manipulative therapy may be warranted to improve diagnosis of cervical artery dissection
- Patients with neck pain should be informed of the potential risks and benefits of receiving cervical manipulative therapy and practitioners should carefully consider cervical artery dissection prior to performing cervical manipulation