Cervical spinal manipulation and vertebrobasilar ischemia

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Spinal manipulation dates back to the time of Hippocrates and is increasingly being used in the practice of modern-day practitioners, particularly chiropractors, osteopaths, and physiatrists. This lecture will present relevant facts with regard to the complex issue of cervical spinal manipulative therapy (CSMT) and its possible link to a type of cerebrovascular accident (CVA) in the posterior cerebral circulation, known as vertebrobasilar ischemia (VBI). Landmark articles on CSMT and VBI will be critically reviewed. Current estimations as to the incidence and prevalence of CMST related VBI will also be discussed. A review will be conducted of cerebrovascular anatomy, hemodynamics, and proposed pathophysiological mechanisms believed to be responsible for VBI following CMST, in particular, vertebral artery dissection (VAD). Risk factors for CVAs and the efficacy of proposed tools to screen patients undergoing CSMT for VBI will be reviewed, as well as in-office recognition of evolving VBI and confirmatory imaging studies. Recommendations and action plans for practitioners who provide or refer for CMST will be offered, followed by the discussion on developing evidence of increased plasma homocysteine levels and potential case management considerations.

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