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# Complementary therapies for cerebrovascular disease

Cardiovascular disease (CVD) is still the major cause of death in Australia, although it is slowly being overtaken by cancer with regard to mortality, and depression with regard to total burden of disease. There are many well known medical and surgical options for managing CVD but, as with other chronic conditions, an increasing number of people are exploring complementary therapies as an adjunct to medical treatment. This article explores some of the issues and therapies relating to cerebrovascular disease.

**Although it is estimated that 60–65% of the Australian population have used complementary therapies (CT) at some time, the figure with regard to cardiovascular disease (CVD) is not known. One study<sup>1</sup> found that 36% of patients with CVD had used CT in the previous 12 months; the most commonly used therapies being herbs (18%) (eg. echinacea, garlic, ginseng, *Ginkgo biloba*, glucosamine) and mind-body therapies (17%) (eg. deep breathing exercises, meditation). Most of this usage was for general medical conditions, overall wellbeing, or symptom control with only 10% using CT specifically for their CVD and related risk factors. In this study the majority of patients reported that they perceived the CT to be helpful.<sup>1</sup>**

## Mental practice

The mind is a powerful driver of our physiology and neurology, and practices such as meditation, which down regulate the stress response, have been found to be useful in the management of CVD and hypertension. A study by Castillo-Richmond<sup>2</sup> examined the effect of transcendental meditation and found reversal of carotid atherosclerosis and consequent reduction in risk for cerebrovascular events. This was not explainable by other risk factors controlled for in the study. A more recent study looked at the use of the mind in quite a different way as part of stroke rehabilitation. Mental practice (MP) of a motor skill is known to activate the same musculature and neural pathways as physical practice of the same skill. A randomised controlled trial (RCT) on 32 stroke patients compared the efficacy of a rehabilitation program incorporating MP of selected arm movements to a placebo intervention.<sup>3</sup> The patients had moderate motor deficits. The experimental group attended 30 minute MP sessions twice per week for 6 weeks on top of their usual

rehabilitation. Outcomes were evaluated by a 'blinded rater'. Despite no pre-existing group differences, subjects attending MP showed statistically and clinically significant reduction in impairment, increased arm function, and exhibited new ability to perform activities of daily living.

## Electro-acupuncture

Electro-acupuncture is often used for patients with stroke. A recent RCT<sup>4</sup> of 63 patients with an initial ischaemic stroke looked at the outcome of a conventional rehabilitation program plus or minus an additional eight treatments with electro-acupuncture over 1 month. Statistically and clinically significant improvement in function was demonstrated for the acupuncture group relative to the control group at various points in the 3 month follow up period for most, but not all, scales. The authors conclusion: 'Electro-acupuncture can improve motor function, especially in upper limb motor function, for patients with first ever ischaemic stroke'. A Chinese review of studies on acupuncture and moxibustion suggests they 'can relieve spastic paralysis after stroke'.<sup>5</sup> These conclusions, however, need to be supported by more methodologically sound studies in order to confirm outcomes and define mechanisms. A small trial<sup>6</sup> on aromatherapy acupressure, compared to acupressure alone, found both to be equally effective in reducing hemiplegic shoulder pain and improving motor power in stroke patients.

## Garlic, ginseng and Ginkgo bilboa

Garlic has a range of beneficial effects for CVD. A review of evidence suggests that consuming half to one clove of garlic (or equivalent) per day has a cholesterol lowering effect of up to 9% and that aged garlic extract is associated with anticlotting effects and modest reductions in blood pressure.<sup>7,8</sup> Animal studies have suggested that ginseng

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extract may be a promising agent for the treatment of ischaemic stroke and other diseases involving activation of mitochondrial cell death signaling.<sup>9</sup> Largely due to the small number of methodologically sound trials, a recent Cochrane review concluded that as yet 'there was no convincing evidence from trials of sufficient methodological quality to support the routine use of *Ginkgo biloba* extract to promote recovery after stroke. High quality and large scale RCTs are needed to test its efficacy'.<sup>10</sup>

## Conclusion

Although this review is not comprehensive, it does indicate that there are a range of potential CT that can be used in stroke specifically, and CVD more generally. These can help to alter disease progression, improve rehabilitation outcomes, and assist with symptom management. The modern GP needs to be able to discuss these therapies with CVD patients as part of a comprehensive management plan.

Conflict of interest: none declared.

## References

1. Yeh GY, Davis RB, Phillips RS. Use of complementary therapies in patients with cardiovascular disease. *Am J Cardiol* 2006;98:673–80.
2. Castillo-Richmond A, Schneider RH, Alexander CN, et al. Effects of stress reduction on carotid atherosclerosis in hypertensive African Americans. *Stroke* 2000;31:568–73.
3. Page SJ, Levine P, Leonard A. Mental practice in chronic stroke: results of a randomised, placebo-controlled trial. *Stroke* 2007;38:1293–7. Epub 2007 Mar 1.
4. Hsieh RL, Wang LY, Lee WC. Additional therapeutic effects of electroacupuncture in conjunction with conventional rehabilitation for patients with first-ever ischaemic stroke. *J Rehabil Med* 2007;39:205–11.
5. Zhang ZQ, Tan JL. Advances of studies on acupuncture and moxibustion for treatment of spastic paralysis after stroke. *Zhongguo Zhen Jiu* 2006;26:825–8.
6. Shin BC, Lee MS. Effects of aromatherapy acupressure on hemiplegic shoulder pain and motor power in stroke patients: a pilot study. *J Altern Complement Med* 2007;13:247–51.
7. Tapsell LC, Hemphill I, Cobiac L, et al. Health benefits of herbs and spices: the past, the present, the future. *Med J Aust* 2006;185:S4–24.
8. Dos Santos-Neto LL, de Vilhena Toledo MA, Medeiros-Souza P, de Souza GA. The use of herbal medicine in Alzheimer's disease—a systematic review. *Evidence Based Complementary & Alternative Medicine*. 2006;3:441–5.
9. Zhang B, Hata R, Zhu P, et al. Prevention of ischemic neuronal death by intravenous infusion of a ginseng saponin, ginsenoside Rb(1), that upregulates Bcl-x(L) expression. *J Cereb Blood Flow Metab* 2006;26:708–21.
10. Zeng X, Liu M, Yang Y, et al. *Ginkgo biloba* for acute ischaemic stroke. *Cochrane Database Syst Rev* 2005;CD003691.