

... given the relative safety of CAM therapies, clinicians could reasonably consider prescribing short trials of CAM therapies for which there is some evidence of effectiveness for short-term pain relief.

Complementary and Alternative Medicine for Neuropathic Pain

By John Mayer, D.C., Ph.D., Lincoln College Endowed Chair, University of South Florida

Introduction

Neuropathic pain is "pain arising as a direct consequence of a lesion or disease affecting the somatosensory system."^{1,2} Various conditions may result in neuropathic pain,¹ such as diabetic neuropathy, post-herpetic neuropathy, peripheral entrapment neuropathies (e.g. carpal tunnel syndrome), and radiculopathies. Given that neuropathic pain is common, disabling, and difficult to treat,¹ it is not surprising that patients with neuropathic pain often choose complementary and alternative medicine (CAM) therapies. In a 2004 survey, 43 percent of patients with peripheral neuropathies reported that they used CAM therapies to help manage their symptoms.³ Many patients in this survey reported that they chose CAM

therapies because their pain was inadequately controlled by standard medical treatment.³ The most frequently used CAM therapies by these patients were acupuncture, chiropractic manipulation, herbal remedies, magnetic therapies, and vitamins.³

While the use of CAM therapies appears to be extensive in patients with neuropathic pain, the effectiveness of these therapies is not well-understood. Therefore, the purpose of this article is to summarize the findings of a recently-completed literature review on the effectiveness of CAM therapies for neuropathic pain.⁴

Methods

Literature search strategy:

- Patients: Adults with peripheral or

central neuropathic pain syndromes.

- CAM therapies included: Since there are hundreds of specific forms of CAM therapies, the literature search was restricted to a few interventions, including acupuncture, alpha lipoic acid, B vitamins, manipulation, transcranial magnetic stimulation (TMS), and transcutaneous electrical nerve stimulation (TENS).
- Articles: Randomized controlled trials (RCTs) published from January 1990 - July 2009.
- Databases searched: MEDLINE, CINAHL, EMBASE.

Results

Over 1,000 articles were uncovered in the search of the literature. Of these articles, 30 RCTs were found to be rel-

evant, including three RCTs for acupuncture, one RCT for acupuncture and B vitamins, six RCTs for alpha lipoic acid, one RCT for alpha lipoic acid and B vitamins, six RCTs for B vitamins, five RCTs for manipulation, five RCTs for TENS, and three RCTs for TMS. Overall, the quality of these RCTs was poor, since many had small sample sizes and only a few reported long-term outcomes. Also, the six CAM therapies included in this review were only studied in a few of the many different types of neuropathic pain conditions.

Discussion

Considering the limited available evidence and mixed findings, it is impossible to make definitive conclusions from this systematic literature review about the effectiveness of common CAM therapies for the management of neuropathic pain. Nonetheless, a few important observations can be made:

- ▶ **Safety.** CAM therapies are relatively safe. No serious adverse events were reported in any of the RCTs and the reported minor side effects were typically self-limiting and temporary.
- ▶ **Acupuncture.** There is some evidence that acupuncture is effective for short-term pain relief or improvements in global symptoms for lumbar radiculopathy / sciatica, diabetic neuropathy, and carpal tunnel syndrome, but ineffective for HIV neuropathy.
- ▶ **Alpha lipoic acid.** There is some evidence that alpha lipoic acid is effective for short-term pain relief for diabetic neuropathy and lumbar radiculopathy / sciatica, but ineffective for global symptoms for diabetic neuropathy.
- ▶ **B Vitamins.** There is strong evidence that B vitamins are ineffective for diabetic neuropathy and carpal tunnel syndrome, and some evidence that B vitamins are ineffective for alcoholic neuropathy.
- ▶ **Manipulation.** There is some evidence that manipulation is effective for short-term pain relief for carpal tunnel syndrome and lumbar radiculopathy / sciatica.
- ▶ **TENS.** There is some evidence that TENS is effective for short-term pain

relief and improvements in global symptoms for diabetic neuropathy, but ineffective for spinal cord injury neuropathy.

- ▶ **TMS.** There is some evidence that TMS is effective for short-term pain relief for trigeminal neuralgia and post-stroke pain.

Conclusions

CAM therapies are frequently used by patients to manage symptoms related to neuropathic pain. The currently available evidence base for CAM therapies for neuropathic pain is too small to definitively guide treatment. However, given the relative safety of CAM therapies, clinicians could reasonably consider prescribing short trials of CAM therapies for which there is some evidence of effectiveness for short-term pain relief. Likewise, clinician should consider discarding CAM approaches for which there is evidence for lack of effectiveness. High quality clinical trials are needed to help clarify the efficacy of CAM therapies for neuropathic pain compared with standard medical treatments and placebo. ◀FCA

References

- 1) O'Connor AB, Dworkin RH. Treatment of neuropathic pain: An overview of recent guidelines. *Am J Med.* 2009;122(10A):S22-32.
- 2) Treede RD, Jensen TS, Campbell JN, et al. Neuropathic pain: redefinition and a grading system for clinical research purposes. *Neurology.* 2008;70:1630-5.
- 3) Brunelli B, Gorson K. The use of complementary and alternative medicines by patients with peripheral neuropathy. *J Neurol Sci.* 2004;218(1-2):59-66.
- 4) Mayer JM, Haldeman S. Complementary and alternative medicine. Chapter in *Neuropathic Pain: Mechanisms and Management*, editors: Simpson D, McArthur J, Dworkin B. Oxford University Press, New York (in preparation).

Dr. Mayer is the Lincoln College Endowed Chair in Biomechanical and Chiropractic Research, and a tenured faculty member in the College of Medicine of University of South Florida. Dr. Mayer is the principal investigator and co-principal investigator on federally-funded, injury prevention research projects. He is instructor for the Health Promotion and Wellness, Critical Inquiry 3, and Primary Care Clerkship-Low Back Pain graduate courses at the USF College of Medicine. He serves as a manuscript reviewer for several scientific journals and advisory board member for various health and research organization. He is also an honorary member of the Florida Chiropractic Association."



**The FCA
CONGRATULATES
John Mayer,
D.C., Ph.D.
Lincoln College
Endowed Chair in
Biomechanical &
Chiropractic
Research**

**College of
Medicine
University of
South Florida**

**Upon being
granted tenure on
June 24, 2010.**

**Tenure recognizes
faculty members'
significant
scholarly
contributions to
the university and
their disciplines.**

**FLORIDACHIROPRACTIC
association • inc**