

THE USE OF NETTLE STINGS FOR PAIN

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This brief report was triggered by an unusual self-treatment approach recently encountered by the author. During routine subjective examination of a patient with chronic low back pain, the patient reported that previous pain relief for the presenting condition had been obtained from the application of stinging nettles (*Urtica dioica*). The application involved a gloved family member gently flicking the lower half of the back with the leafed end of the plant. At the time, the author was unsure of the veracity of this claim, but subsequent inquiry reveals that although not numerous, there are reports and even clinical trials on the use of nettle stings for the relief of musculoskeletal pain.

Through history, the nettle has served a range of functions for people of the Northern hemisphere. It has been used for medical purposes and eaten as a food and has provided fiber for cloth, rope, and bowstrings.¹ For medical purposes, the nettle can be incorporated into a variety of compounds to be ingested or can be used to deliberately sting the skin (ie, urtification).^{1,2} Urtification using nettles appears to have been associated with 2 main uses. It has been most commonly described for use on musculoskeletal pain, but there are also reports that Roman soldiers posted to Britain used it for the sensation of warmth that the sting delivers.^{1,3}

Pollard and Briggs describe the method by which the nettle delivers a sting.⁴ The leaf of the nettle is covered in tiny hairs, each of which has a rounded tip. The end of each hair is very brittle due to high silicon content. When brushed, the rounded tip snaps off obliquely, turning the hair into the functional equivalent of a small hypodermic syringe. This penetrates the skin, allowing a toxin at the base of the hair to be injected. The toxin delivered contains a range of chemicals, including histamine, serotonin, and acetylcholine.^{5,6}

The sting induces wheal, flare, and C fibre discharge.^{6,7} The description of nettle sting has been reported as a prickling, burning, and for some an itching sensation.⁷ Randall et al have undertaken several studies assessing the effect of nettle sting on musculoskeletal symptoms.^{2,3} The first consisted of a qualitative study exploring various aspects of use in a group of 18 subjects already self-treating with nettle stings.³ Subjects had a variety of long-term musculoskeletal conditions resulting in pain. The study explored a number of interesting issues with these patients but of most relevance to this report is the finding that all but one of the subjects found they gained good short-term relief of symptoms from nettles. It must be remembered, however, that this group of patients were self-selecting, having been recruited from radio and newspaper advertisements.

In a follow-up double-blind, cross-over trial, Randall et al assessed nettle leaf sting versus a visually similar placebo leaf in 27 subjects with chronic base of thumb pain.² Subjects applied either the placebo leaf or nettle leaf to the base of the symptomatic thumb once a day for a week. Subjects were told that 2 types of nettle leaf were being tested and that a mild stinging sensation was often associated with the treatment. After the treatment week, there was a 5-week washout before the next week of treatment using the other leaf. The key outcome measures were pain (visual analog scale) and disability (Stanford Health Assessment Questionnaire). After 2 days of use, pain in the nettle group was lower than that in the placebo leaf group. At 1 week, pain and disability levels in the group using the stinging nettle leaf were markedly less than in the placebo leaf. This reached statistical significance, but the clinical significance of the difference was not discussed. At the end of the study, 17 of the subjects reported they would like to use stinging nettles in the future.

As with so many pain-relieving strategies, the exact neurophysiology underlying symptom reduction is not well understood.^{2,8} Much clearer is that numerous societies throughout history have developed treatments that cause mild pain or irritation to ease a more severe pain.⁹ These treatments are often called counter-irritants. It is interesting to note that many modern physical treatment techniques also cause a degree of mild pain or irritation. Perhaps many manual/physical therapy techniques purported to break down scar tissue, loosen joints, or improve energy flows are counter-irritants working on similar neurophysiological mechanisms.

Nettles are safe and easily accessible in many parts of the world.² Randall et al continue to research this previously more widespread treatment.^{2,3} Is it time to add nettle leaf sting to heat and ice as home physical therapies for short-term pain relief?

Acknowledgments

Thanks to Dr Colin Randall for information and correspondence.

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