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File: ■ Arnica (*Arnica montana*)
■ Peppers (*Capsicum* spp.)
■ Comfrey (*Symphytum officinale*)
■ Osteoarthritis

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RE: Topical Arnica and Comfrey Preparations May Provide Relief for Patients with Osteoarthritis

Cameron M, Chrubasik S. Topical herbal therapies for treating osteoarthritis. *Cochrane Database Syst Rev.* May 31, 2013;5:CD010538. doi: 10.1002/14651858.CD010538.

Osteoarthritis is characterized by joint pain and troubled mobility resulting from the decrease of cartilage in the joints. Resulting pain and mobility problems often interfere with quality of life. This review set out to add contemporary results to a Cochrane review concerning the topical use of medicinal plants in the treatment of osteoarthritis. Topical treatments may be preferred for pain compared to oral drugs, especially for superficial joints, such as those in the hands and fingers. Topical agents have reduced systemic exposure concentrations to oral preparations. No structural benefits have been reported from topical treatments; however, they are only used for pain relief. Herein, herbal medicines are referred to as products with active ingredients from botanical parts and may be oils, tinctures, or other preparations. Mixtures with extracted or synthetic compounds were excluded because they are no longer herbal. This review focused on the topical use of arnica (*Arnica montana*), peppers (*Capsicum* spp.), and comfrey (*Symphytum officinale*). In contrast to the oral medicinal plant products, topical treatments act in part as counterirritants or are toxic when given orally. Outcome measures included pain, physical function, and adverse events.

To compile information, the databases searched were Cochrane Central Register of Controlled Trials (CENTRAL), MEDLINE, EMBASE, AMED, CINAHL, ISI Web of Science, and World Health Organization Clinical Trials Registry Platform, through February 2013. Search terms included arthritis ("all forms") together with medicinal plant products. Included studies were randomized controlled trials (RCTs) employing both treatments and placebos.

In total, 7 studies were included in this review, with 785 patients and 7 plant treatments overall. One study with 174 patients showed that arnica extract gel had similar efficacy in comparison to the nonsteroidal anti-inflammatory drug ibuprofen. Arnica gel treatment reduced pain in patients by 3.8% more and improved hand function by 1% more than

ibuprofen. However, it is unclear whether this is clinically meaningful. The total adverse side effects were slightly higher in the arnica gel group than those reported for ibuprofen (13% vs. 8%, respectively) but not significantly different as observed in the past.¹

According to one study including 99 patients suffering from osteoarthritis in their knee, use of an extract of hot peppers did not result in any improvement. Following a 4-week treatment, pepper treatment led to a 1% pain decrease over placebo, and function was 3% greater. Those taking peppers reported a much higher incidence of adverse side effects as compared with the placebo (80% vs. 20%, respectively). Irritation and a burning sensation on the skin were reported adverse side effects.

In another study of 220 patients suffering from knee osteoarthritis, it is mentioned that comfrey extract gel, applied thrice daily for 3 weeks, helped reduce pain in patients who had relatively mild pain levels to start; pain was decreased by 42%, but this study did not include the measurement of function. The adverse side effects reported for comfrey use were somewhat less than in the placebo group (6% vs. 14%, respectively).

The review also covers two low-quality studies on topical stinging nettle (*Urtica dioica* ssp. *dioica*) and a study of two traditional Chinese medicinal preparations, which were insufficiently declared by the authors.

The authors conclude that in terms of assessing efficacy, many studies of topical herbal treatments for osteoarthritis are inadequate, and further, rigorous investigation is needed.

—Amy C. Keller, PhD

Reference

¹Oloff HS. Arnica gel as effective as ibuprofen gel in osteoarthritis of the hands. *HerbClip*. May 31, 2007 (No 050571-329). Austin, TX: American Botanical Council. Review of Choosing between NSAID and arnica for topical treatment of hand osteoarthritis in a randomised, double-blind study by Widrig R, Suter A, Saller R, Melzer J. *Rheumatol Int*. 2007;27(6):585-591.

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