Effect of a blend of comfrey root extract (Symphytum officinale L.) and tannic acid creams in the treatment of osteoarthritis of the knee: randomized, placebo-controlled, double-blind, multiclinical trials

Doug B. Smith, PhD\textsuperscript{a}, Bert H. Jacobson, EdD\textsuperscript{b}

Objective

The purpose of this study was to determine the effect of 2 concentrations of topical, comfrey-based botanical creams containing a blend of tannic acid and eucalyptus to a eucalyptus reference cream on pain, stiffness, and physical functioning in those with primary osteoarthritis of the knee.

Methods

Forty-three male and female subjects (45-83 years old) with diagnosed primary osteoarthritis of the knee who met the inclusion criteria were entered into the study. The subjects were randomly assigned to 1 of 3 treatment groups: 10% or 20% comfrey root extract (Symphytum officinale L.) or a placebo cream. Outcomes of pain, stiffness, and functioning were done on the Western Ontario and MacMaster Universities Osteoarthritis Index. Participants applied the cream 3× a day for 6 weeks and were evaluated every 2 weeks during the treatment.

Results

Repeated-measures analyses of variance yielded significant differences in all of the Western Ontario and MacMaster Universities Osteoarthritis Index categories (pain $P<.01$, stiffness $P<.01$, daily function $P<.01$), confirming that the 10% and 20% comfrey-based creams were superior to the reference cream. The active groups each had 2 participants who had temporary and minor adverse reactions of skin rash and itching, which were rapidly resolved by modifying applications.

Conclusion

Both active topical comfrey formulations were effective in relieving pain and stiffness and in improving physical functioning and were superior to placebo in those with primary osteoarthritis of the knee without serious adverse effects.

Key indexing terms

Osteoarthritis; Knee pain; Topical; Therapeutic; Botanicals

Corresponding author. Health and Human Performance, AB Harrison Exercise Physiology Lab, Oklahoma State University, 106 E Willard Hall, Stillwater, OK 74078. Tel.: +1 405 744.6632; fax: +1 405 744 7758.

Copyright © 2011 National University of Health Sciences. Published by Elsevier Inc. All rights reserved.
Effect of a blend of comfrey root extract (Symphytum officinale L.) an...