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FILE: ■ **Comfrey (*Symphytum officinale*)**

- **Ankle Distortions**
- **Anti-inflammatory**

HC 010153-279

Date: April 29, 2005

RE: Efficacy of Comfrey (*Symphytum officinale*) in Treating Ankle Distortions

Koll R, Buhr M, Dieter R, et al. Efficacy and tolerance of a comfrey root extract (Extr. Rad. Symphyti) in the treatment of ankle distortions: results of a multicenter, randomized, placebo-controlled, double-blind study. *Phytomed.* 2004;11(6)470–7.

Comfrey (*Symphytum officinale*) is a medicinal plant with known anti-inflammatory and analgesic properties. External preparations of comfrey are commonly used in sports medicine for the treatment of bruises, ankle distortions, and sprains and are gaining popularity for the treatment of painful muscles and joints. It is uncertain which constituents in comfrey are responsible for its therapeutic effects; however, it is postulated that allantoin or rosmarinic acid may be involved. Mucopolysaccharides and potentially toxic pyrrolizidine alkaloids (PAs) are also known to be present in comfrey. The objective of this study was to determine the efficacy and safety of a comfrey root extract in patients with ankle distortions.

Ambulatory patients with unilateral acute ankle sprains (mean age: 31.8 years; 78.9% men) were enrolled in this randomized, multicenter, double-blind, placebo-controlled study, which was conducted at the German Sport University in Cologne and four other sports medicine and orthopedic practices between July 20 and December 27, 1999. The patients received topical treatments with approximately 2 g of ointment of comfrey extract (Kyttas-Salbe®; Merck, Darmstadt, Germany) 4 times daily for 7–9 days, 100 g of the ointment contains 35 g of a 1:2 fluid extract of comfrey that is low in PAs (less than 0.35 mcg/g) and contains 0.2–0.5% allantoin. The placebo group received treatment with an ointment containing no comfrey extract. The primary outcome variable was tonometrically recorded pressure pain; secondary outcomes were swelling, subjective assessment of pain on a visual analogue scale (VAS), joint mobility, and physician and patient perception of efficacy. The variables were assessed on days 0, 4, and 7 of treatment.

One-hundred forty subjects completed the study protocol ($n = 80$ in the comfrey group and 60 in the placebo group). The reduction in pain from baseline to visit 3 was significantly greater ($p < 0.05$) in the comfrey group (2.44 kp/cm^2) than in the placebo group (0.95 kp/cm^2). The reduction in swelling occurred more rapidly in the comfrey group than in the placebo group; the difference between treatments was significant at visits 2 ($P = 0.0011$)

and 3 ($P = 0.0001$). There was no statistically significant difference in patients' subjective assessment of pain (VAS) between comfrey (3.42 cm) and placebo (3.25 cm). Similarly, subjective movement pain was not significantly different, decreasing by 4.46 cm in the comfrey group and by 3.72 cm in the placebo group. Joint mobility improved more rapidly in the comfrey group than in the placebo group on the basis of improvements in average dorsiflexion and plantar flexion ($P = 0.002$ and 0.0116 , respectively). Global efficacy was significantly better in the comfrey group than in the placebo group according to both physician and patient assessments ($P < 0.0001$ and $P = 0.0009$, respectively). Three minor adverse events (reddening of the skin) were reported, which resolved without intervention, and no adverse events were reported in the comfrey group. Most of the patients stated that they would use the ointment again.

The results of this study are consistent with the results of other clinical studies that have shown comfrey extract to be effective in alleviating the pain and swelling associated with ankle distortions. Furthermore, the results agree with pre-clinical findings that support the analgesic and anti-inflammatory properties of comfrey and/or its constituents. The results of the present study also confirm the safety of comfrey extract given that local and overall tolerance were rated as either good or excellent by more than 90% of the patients. The authors conclude that, compared with placebo, "comfrey proved clinically and statistically significantly superior concerning reduction of pain, swelling, movement limitation and global efficacy."

—*Brenda Milot, ELS*

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