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RE: Russian Comfrey Extract Applied Topically to Abrasions in Children
Decreases Healing Time


Comfrey (Symphytum spp.) has been widely used for minor injuries such as bruises, sprains, or abrasions. Previous clinical studies have shown that comfrey speeds the healing of knee joint injuries or damaged skin with no reports of adverse side effects. Due to toxic pyrrolizidine alkaloids found in comfrey, it is recommended that this plant only be used topically; however, the authors state that the Russian comfrey (Symphytum uplandicum) cultivar 'Harras' does not contain pyrrolizidine alkaloids. Fresh aerial parts of this cultivar are used in a topical treatment called Traumaplant® (Gehrlicher Pharmazeutische Extrakte GmbH; Eurasburg, Germany). This randomized, controlled, double-blind, clinical trial investigated the potential healing effects of Traumaplant, along with a control cream of lesser comfrey concentration, on circular or elliptical skin wounds of children ranging from 3 to 12 years of age.

Patients (n=108) were randomly assigned to either the treatment (n=54) or control (n=54) groups, and wounds were of a circular or elliptical shape. Patients who had used other topical medications, needed surgery or suturing, or had burns or diseases in the wound area were excluded. The treatment group received a 10% comfrey "cream preparation" (Traumaplant; 25 g of fresh Russian comfrey herb as a 2.5:1 strength extract [10 g] in 100 g of cream); and a 1% comfrey cream (2.5 g of fresh herb as 1 g extract in 100 g of cream) served as the control due to ethics concerns. Both treatments used the same base and were made to look identical. Pyrrolizidine alkaloids were not found in either extracts or final preparations, with a detection limit set at <0.1 µg/g. Cream was applied 1 time per day as a thick layer over the wound and extending out 1 cm over healthy skin; wounds were then covered with a non-occlusive sterile bandage.

The primary outcome was reduction of the wound area measured at baseline, 2-3 days, and 7-9 days. Subgroup analysis included effects of time from wound generation to
treatment, area of the wound at baseline, and nature of the wound. General efficacy was determined by both physician and patient using a 5-point scale ranging from 1 (very good) to 5 (not effective). A 4-point scale was used to assess symptoms associated with tolerance (burning, scaling, reddening, itching, urticaria, or folliculitis), ranging from 0 (not present) to 3 (very severe). Any patient reporting infection would have been dropped from the study.

All patients enrolled completed the study protocol, and no dropouts occurred. Baseline wound area for the 10% and 1% groups were not significantly different (1,035.1 ± 1,160.3 mm² vs. 1,031.7 ± 930.4 mm², respectively). By 1.8 days, wounds of those taking the 10% comfrey cream were decreased by 50%, while this was seen after 2.7 days in the 1% group. This difference was thought to be clinically relevant. Expressed as calculated healing rates, the 10% group rate was higher (0.38 ± 0.18/day, 95% confidence intervals [CI]: 0.33, 0.43) than that of the 1% group (0.26 ± 0.14/day, 95% CI: 0.222, 0.297; P=0.0002). Additionally, time to total wound healing in the 10% group (4.11 days) was significantly less than the 1% group (8.89 days) when regression lines were compared (P=7.8 × 10⁻¹⁴).

On days 2-3, physicians rated the 10% cream significantly more effective (90.7% very good or good) than the 1% cream (55.6% very good or good; P=0.0004). A significant difference was still observed at the end of the study on days 7-9 (P=0.01). Patients also rated the 10% cream significantly more effective than the 1% cream (good to very good in 85.2% of patients vs. 55.6% patients, respectively, P=0.001) after 3 days. This was also seen on days 7-9 (P=0.038). Both creams were well tolerated, and no reactions, irritations, or infections were observed during the course of the study.

This study shows that, in children, a 10% Russian comfrey cream preparation significantly decreased healing time with no reports of adverse side effects. As previous studies have shown comfrey to be useful in treating wounds, its overall safety and efficacy are worthy of this plant's use in acute superficial wound treatment. Speeding wound healing can not only help with the wound itself, but can prevent other infections or complications. As this preparation uses a cultivar of comfrey containing no pyrrolizidine alkaloids, this may point to a safer alternative for comfrey preparations; however, this study examined short-term treatment, and future studies will ideally also address long-term usage of this preparation.

—Amy C. Keller, PhD

Reference


The American Botanical Council has chosen not to reprint the original article.