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## [Effects of Harpagophytum procumbens LI 174 (devil's claw) on sensory, motor und vascular muscle reagibility in the treatment of unspecific back pain].

[Article in German]

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### Abstract

**PROBLEM:** This randomised, double-blind, placebo controlled study was intended to investigate the effects of Harpagophytum procumbens (Devil's Claw) on sensory, motor and vascular mechanisms of muscle pain. In addition to clinical efficacy and tolerability, possible action mechanisms were analysed by means of experimental algometric methods.

**METHODOLOGY:** The study was performed on patients with slight to moderate muscular tension or slight muscular pain of the back, shoulder and neck. On a double-blind randomised basis the verum group received 2x1 film tablets per day, i. e. 2x480 mg/day, of Harpagophytum extract LI 174 (Rivoltan(R)) at 8.00 a.m. and 8.00 p.m. over a certain period. The duration of the therapy was 4 weeks. Data recording at 14-day intervals was made using a visual analogue scale, pressure algometer test, recording of antinociceptive muscular reflexes, muscle stiffness test, EMG surface activity, muscular ischaemia test, clinical global score and subjective patient and physician ratings.

**RESULTS:** A total of 31 patients in the verum group and 32 in the placebo group were treated. After four weeks of treatment there was found to be a clear clinical efficacy of the verum on the clinical global score and in the patient and physician ratings. Highly significant effects were found in the visual analogue scale, the pressure algometer test, the muscle stiffness test and the muscular ischaemia test. No difference from placebo was found in the recording of antinociceptive muscular reflexes or in the EMG surface activity. Tolerability was good; no serious adverse effects occurred.

**CONCLUSIONS:** A highly significant clinical efficacy was achieved with a monotherapy of Harpagophytum dry extract LI 174 after four weeks' treatment at a dosage of 2x480 mg/day in cases of slight to moderate muscular pain. With regard to the action mechanisms investigated, it may be concluded that treatment with Harpagophytum extract LI 174 may be expected to have a significant influence on sensory and vascular muscular response and bring about a reduction in muscle stiffness. No central nervous effects were discovered.

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