

## Effectiveness of leech therapy in chronic lateral epicondylitis (Tennis elbow): a randomized controlled trial.

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### **OBJECTIVES:**

Leech therapy has been found to be effective in osteoarthritis of the knee and hand in previous trials. Chronic epicondylitis is a prevalent pain syndrome with limited treatment options. In this study, we tested whether leech therapy would be beneficial in the symptomatic treatment of chronic lateral epicondylitis.

### **METHODS:**

Forty (40) patients with manifestation of epicondylitis of at least 1-month duration were randomized to a single treatment with 2 to 4 locally applied leeches or a 30-day course with topical diclofenac. The primary outcome was change of pain sum score on day 7 calculated from 3 visual analog scales for pain during motion, grip, and rest. Secondary outcomes included disability (Disability of the Arm, Shoulder, Hand questionnaire), physical quality of life (Short Form-36), and grip strength. Outcomes and safety were assessed on days -3, 0, 7, and 45.

### **RESULTS:**

Leeches induced a significantly stronger decrease of the pain score ( $143.7 \pm 36.9$  to  $95.3 \pm 45.1$ ) compared with topical diclofenac ( $131.6 \pm 29.6$  to  $134.7 \pm 70.7$ ; mean difference  $-49.0$ ; 95% confidence interval,  $-82.9$  to  $-15.1$ ;  $P=0.0075$ ) after 7 days. On day 45, this group difference was reduced ( $-27.5$ ; confidence interval,  $-60.8$  to  $-5.8$ ;  $P=0.110$ ) due to delayed pain relief with diclofenac. Functional disability showed a stronger decrease in the leech group, which was most prominent after 45 days ( $P=0.0007$ ). Quality of life increased nonsignificantly in the leech group. Results were not affected by outcome expectation.

### **DISCUSSION:**

A single course of leech therapy was effective in relieving pain in the short-term and improved disability in intermediate-term. Leeches might be considered as an additional option in the therapeutic approach to lateral epicondylitis.

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