

LETTER TO THE EDITOR

Response to Letter to the Editor: Low-Dose Dextrose Prolotherapy as Effective as High-Dose Dextrose Prolotherapy in the Treatment of Lateral Epicondylitis? A Double-Blind, Ultrasound Guided, Randomized Controlled Study

In lateral epicondylitis, angiofibroblastic hyperplasia and poor scar tissue occur in response to recurring microtrauma in the tendon, and consequently, complete healing does not take place. In vitro studies using 50% dextrose as a proliferant have shown that exposure of tenocytes to dextrose elicited an inflammatory response through the upregulation of proinflammatory markers, including interleukin 8, cyclooxygenase 2, and prostaglandin 2, and downregulation of anti-inflammatory marker growth factor β .¹ Hypertonic dextrose generates trophic effects on the tendon, such as increased fibroblast proliferation and increased collagen production, and extracellular matrix in treated tendons. However, according to the results of our study, although 5% dextrose is effective in pain, 15% dextrose is more effective in resting and activity pain, hand grip strength, and pressure pain threshold.² Although the 5% dextrose neuromodulation effect decreases pain levels, it should not be forgotten that our aim in lateral epicondylitis treatment is not just pain control. Prolotherapy is a treatment method in which we aim to activate the remodeling process by activating collagen synthesis in potentially affected weak tendons and ligaments.^{3,4}

We agree that 15% dextrose injections are more painful than 5% dextrose and saline when we apply them in clinical practice. We wanted to address that when planning the study, but we did not observe a significant pain difference. The reason for this result may be the amount of solution injected (1 mL). We did not consider adding local anesthetic to the solutions to compare the pain

of those solutions during the injection. If we had applied local anesthetics to the 15% dextrose group so that there would be no painful injection, we could have caused a bias between the groups.

Therefore, further randomized controlled trials involving an adequate number of patients and extended follow-up periods are necessary to reveal which dose has more effects on prolotherapy in lateral epicondylitis treatment.

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