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P02.23. The efficacy of prolotherapy using dextrose-morrhuate for lateral epicondylosis: a pilot randomized controlled trial

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Purpose

Chronic lateral epicondylosis (CLE) is common, expensive and debilitating. A substantial number of patients are refractory to existing therapy and "watchful waiting." Prolotherapy is a CAM injection therapy for chronic musculoskeletal pain including tendinopathy. We assessed dextrose prolotherapy for CLE in a pilot-level study.

Methods

The study design was a 2-arm non-blinded randomized controlled trial. Group 1 received dextrose prolotherapy and Group 2 was a waitlist control. Nineteen adults seen with at least 3 months of symptomatic CLE in 22 elbows refractory to prior care received ultrasound-guided injections of 20% dextrose-morrhuate sodium (Group 1) solution at baseline, 4, and 8 weeks. Waitlist subjects (Group 2) were followed and discouraged from starting new care. Primary outcome measure was Patient-rated Tennis Elbow Evaluation [PRTEE, (100 points) assessed at baseline, 4, 8 and 16 weeks]. Prolotherapy participants were additionally assessed at 32 weeks. Secondary measures included dynamometer-assessed pain free grip strength and participant satisfaction.

Results

No baseline differences existed between the groups in gender, duration of elbow pain, prior therapy or baseline PRTEE scores. Prolotherapy participants (n=10) reported improved PRTEE composite scores compared to Waitlist (n=12) at 4 and 16 weeks ($p<0.05$), and improved pain and function PRTEE subscale scores ($p<0.05$) at 4 and 16 weeks, respectively. Prolotherapy participants reported improvement in composite PRTEE scores from baseline at 16 and 32 weeks of 17.9±11.64 and 24.8±10.58 points, a difference of 49.7% and 70.2% respectively, far in excess of the 11-point PRTEE-based minimal clinical important difference. Grip strength improved in all groups without between-group difference. Satisfaction with prolotherapy was high; there were no adverse events.

Conclusion

Prolotherapy using dextrose and morrhuate sodium resulted in safe, significant, sustained improvement of PRTEE-based elbow composite, pain and function scores compared to baseline status and waitlist control subjects. The results of this pilot study suggest the need for a definitive clinical trial.

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