

Platelet-rich plasma versus autologous whole blood for the treatment of chronic lateral elbow epicondylitis: a randomized controlled clinical trial.

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Source

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Abstract

BACKGROUND:

Chronic lateral elbow epicondylitis is a tendinosis with angiofibroblastic degeneration of the wrist extensors' origin. Healing of this lesion is reported with the use of autologous blood as well as with platelet-rich plasma (PRP).

PURPOSE:

A comparative study of these 2 treatments was conducted in an effort to investigate the possible advantages of PRP.

STUDY DESIGN:

Randomized controlled trial; Level of evidence, 1.

METHODS:

Twenty-eight patients were divided equally into 2 groups, after blocked randomization. Group A was treated with a single injection of 3 mL of autologous blood and group B with 3 mL of PRP under ultrasound guidance. A standardized program of eccentric muscle strengthening was followed by all patients in both groups. Evaluation using a pain visual analog scale (VAS) and Liverpool elbow score was performed at 6 weeks, 3 months, and 6 months.

RESULTS:

The VAS score improvement was larger in group B at every follow-up interval but the difference was statistically significant only at 6 weeks, when mean improvement was 3.8 points (95%

confidence interval [CI], 3.1-4.5) in group B (61.47% improvement) and 2.5 points (95% CI, 1.9-3.1) in group A (41.6% improvement) ($P < .05$). No statistically significant difference was noted between groups regarding Liverpool elbow score.

CONCLUSION:

Regarding pain reduction, PRP treatment seems to be an effective treatment for chronic lateral elbow epicondylitis and superior to autologous blood in the short term. Defining details of indications, best PRP concentration, number and time of injections, as well as rehabilitation protocol might increase the method's effectiveness. Additionally, the possibility of cost reduction of the method might justify the use of PRP over autologous whole blood for chronic or refractory tennis elbow.