



The role of needle fenestration with platelet-rich plasma in chronic tennis elbow with indication of partial extensor tendon tear

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INTRODUCTION

- This study assesses treatment outcomes of pain and function for refractory extensor carpi radialis brevis (ECRB) tendinosis after tendon fenestration vs. platelet-rich plasma (PRP) with fenestration.

METHODS

- Retrospective chart review and statistical analysis was performed for 27 patients with chronic lateral epicondylalgia from January 1, 2016 – December 31, 2017.
- Patients were diagnosed with ECRB tendinosis and treated with 1% lidocaine/normal saline injection with fenestration (LSIF) and/or platelet-rich plasma injection with fenestration (PRPIF).
- Numeric pain rating scale (NPRS) and Patient-Rated Elbow Evaluation (PREE) were used for quantitative assessment of pain and function.

RESULTS

- Patient population: 59% female and 41% male with mean age of 53.9 ± 5.9 years (range 41-67 years)
- The dominant elbow was affected by LE in 22 (81%) patients.
- Mean follow-up: 23.4 ± 4.9 months (range 15-32 months)
- LSIF treatment resulted in an average reduction of 6.3 ± 0.9 (95% CI = 5.879, 6.721) and 19.3 ± 7.4 (95% CI = 48.143, 53.851) in NPRS and PREE scores, respectively.
- LSIF plus PRPIF treatment resulted in an average reduction of 5.9 ± 1.2 (95% CI = 4.789, 7.011) and 20.6 ± 9.3 (95% CI = 46.125, 59.275) in NPRS and PREE scores. (Figure 1)
- The change in NPRS and PREE scores between LSIF alone and LSIF plus PRPIF were not statistically significant ($p = 0.45$ and 0.58 , respectively).
- NPRS and PREE postoperative scores were significantly lower in both cohorts compared to preoperative scores at final follow-up ($p < 0.001$).

Extensor carpi radialis brevis tendinosis with a low or high-grade partial tendon tear indicates that treatment with **needle fenestration** is not as effective as **platelet-rich plasma with fenestration**.



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CONCLUSION

- For a vast majority of ECRB tendinosis, tendon fenestration yielded positive results.
- However, for the subset with low (<50%) or high-grade (>50%) partial tendon tears, fenestration alone had limited success while PRPIF yielded positive results.

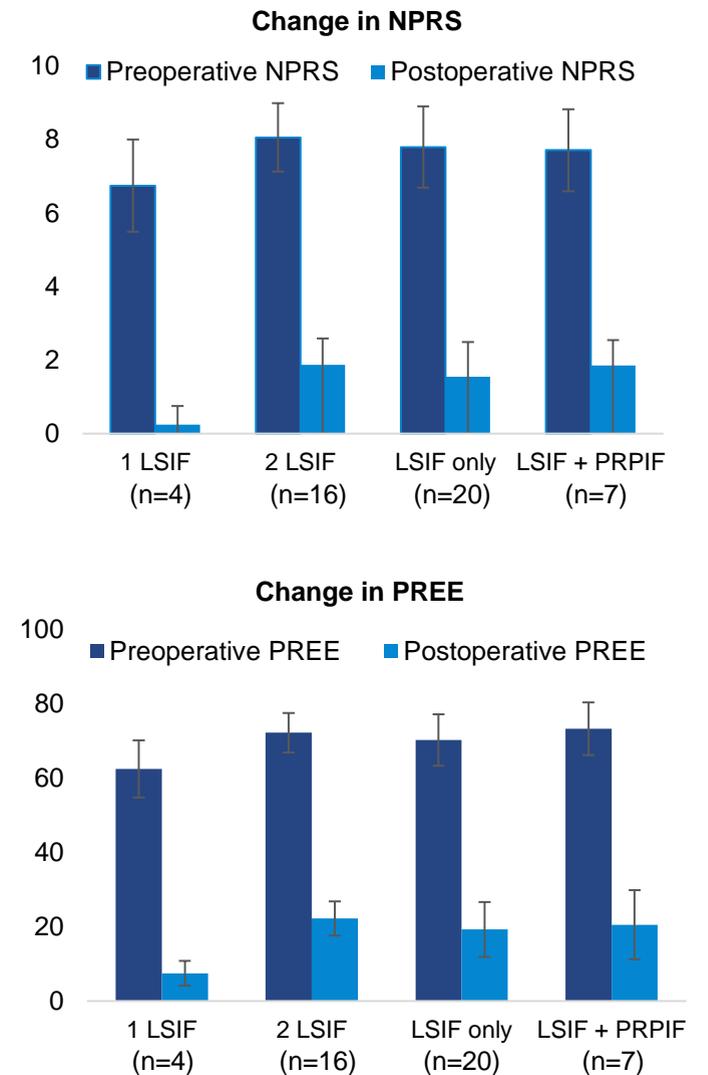


Figure 1. Changes in pre- and post-procedure NPRS and PREE scores by treatment cohort