

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

Tracey L. Hunter <sup>A,B</sup>, Spencer W. Sullivan <sup>A</sup>, Struan H. Coleman <sup>A</sup>, Eric Brand <sup>B</sup>, James J. Kinderknecht <sup>A</sup>, Vijay B. Vad <sup>A,B</sup>

Hospital for Special Surgery, <sup>A</sup> Department of Sports Medicine, <sup>B</sup> Department of Physiatry

### 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  $53.9 \pm 5.9$  years (range 41-67 years)
- The dominant elbow was affected by LE in 22 (81%) patients.
- Mean follow-up:  $23.4 \pm 4.9$  months (range 15-32 months)
- LSIF treatment resulted in an average reduction of  $6.3 \pm 0.9$  (95% CI = 5.879, 6.721) and  $19.3 \pm 7.4$  (95% CI = 48.143, 53.851) in NPRS and PREE scores, respectively.
- LSIF plus PRPIF treatment resulted in an average reduction of  $5.9 \pm 1.2$  (95% CI = 4.789, 7.011) and  $20.6 \pm 9.3$  (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 ( $p < 0.001$ ).

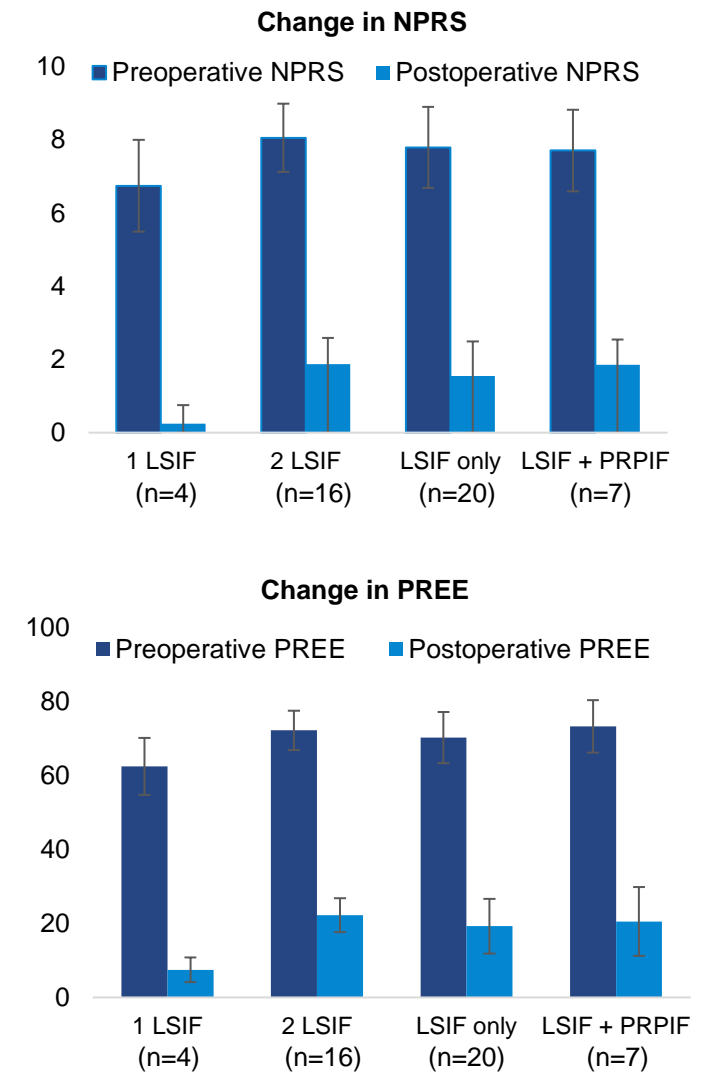
**Extensor carpi radialis brevis tendinosis with a low or high-grade partial tendon tear indicates that treatment with needle fenestration is not as effective as platelet-rich plasma with fenestration.**



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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