

BACKGROUND

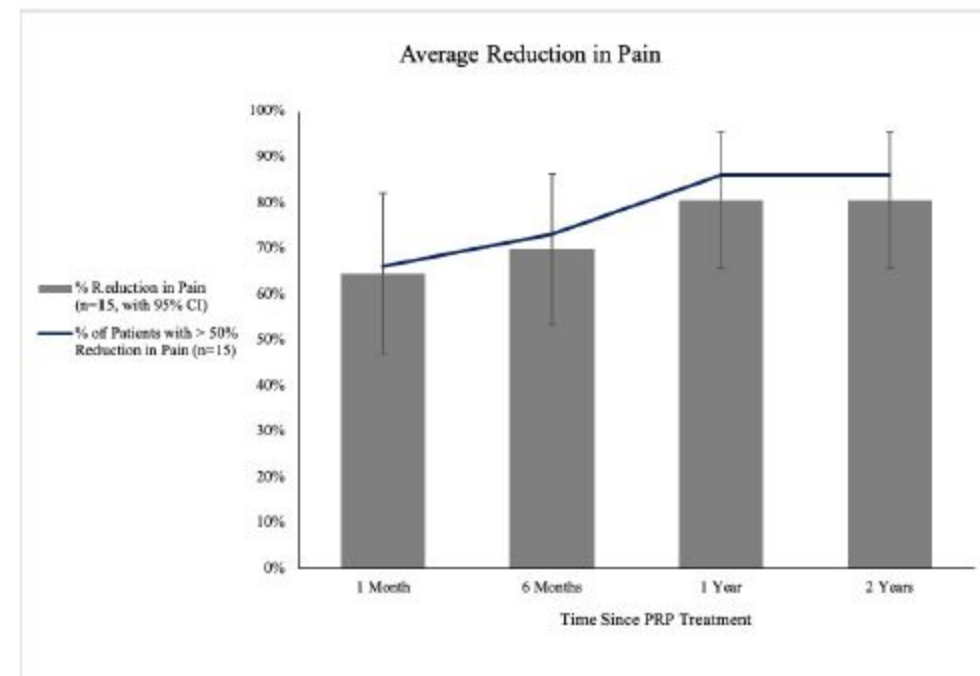
- Achilles tendinopathy is a common musculoskeletal problem, especially among athletic populations. Repeated mechanical strain on the Achilles tendon damages tendon structure and can cause pain, stiffness, swelling, and loss of function.^{1,2}
- Current primary treatment is physical therapy. Platelet Rich Plasma (PRP) represents a potential minimally invasive and cost-effective treatment option. Published results have been limited with significant variations in methodology resulting in conflicting outcomes.^{3,4,5}
- This study evaluates the efficacy of PRP treatment in patients with chronic Achilles tendinopathy.

METHODS

- Retrospective case series study evaluating the reduction in pain of 15 patients treated with a single ultrasound guided PRP injection.
- Patients withheld anti-inflammatory medications for at least 10 days prior and did not receive corticosteroid medications for at least 3 months prior to PRP treatment.
- Following PRP injections, patients were non weightbearing and placed in an Achilles offloading boot for 3 weeks. For the subsequent 3 weeks, just the offloading boot. Activity was unrestricted after 6 weeks.
- All patients rated pain on a scale of 1-10 before the injection, immediately post injection, at 2 weeks, 1 month, 3 months, 6 months, 1 year, 1.5 years, and 2 years or until pain resolved completely.
- The change in reported scores was used to calculate a percent reduction in pain, which was averaged and reported with a 95% confidence interval.

RESULTS

- 15 patients were included in the study (7 male, 8 female). The average age was 58.4 ± 11.5 years.
- Figure 1 demonstrates the percent reduction in pain at follow-up at 1 month, 6 months, 1 year, and 2 years after injection.
 - At one month after injection, there was an average $64.5 \pm 17.5\%$ (95% CI) reduction in pain from baseline.
 - At 6 months there was an average $69.8 \pm 16.4\%$ (95% CI) pain reduction.
 - At both 1 year and 2 years there was an average $80.6 \pm 15\%$ (95% CI) pain reduction.
- At one month, 67% of participants reported a reduction in pain of at least 50%. At 6 months, 73% of participants reported reduction in pain of at least 50%, and at both 1 year and 2 years 86% of participants reported a reduction in pain of at least 50%.



DISCUSSION

- Of the 15 patients included in the study, all experienced reduction in pain.
- 14 patients reported a reduction in pain greater than 50%.
- All patients reported a reduction in pain at 1 month, and only 1 patient reported pain that regressed to baseline levels at the end of follow-up.
- The greatest limitation in this study is a relatively small sample size and the lack of a control group.

CONCLUSIONS

Published results on the efficacy of PRP in treating Achilles tendinopathy are conflicting. In our study, PRP injections, along with conservative patient management, reduced pain by an average of 80.6% ($\pm 17\%$) at the end of follow up, and 86% (n=15) of patients experienced a reduction in pain greater than 50%. This study demonstrates PRP treatment can reduce pain, especially for patients that have failed previous conservative management. Our study suggests PRP treatment remains a valid treatment option for patients with chronic and refractory Achilles tendinopathy.

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