The Efficacy Of Platelet-Rich Plasma (Endoret®) in Rotator Cuff Tendinopathy: A Randomized Controlled Trial.

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INTRODUCTION

- Rotator cuff tendinopathy cause of pain and disability.
- The incidence in active population reported is 14 to 18%.
- More common in women, between 50 to 60 years.

- Management is mainly conservative
- Focuses on the inflammatory process using physical therapy, corticosteroid injection, nosteroid anti-inflammatory drugs.
- 60% of patients are satisfied with treatment.
INTRODUCTION

• There are few previous studies that have evaluated the effect of PRP injection in rotator cuff injury.
• PRP treatment aims to regenerate damaged tissues.
• Stimulating tissue regeneration mechanisms to promote migration, proliferation and differentiation of cells.

• The aim of this study is to determine the use and efficacy of Platelet-Rich Plasma treatment in patients with rotator cuff tendinopathy
MATERIAL AND METHOD

• We performed a double-blind randomized controlled clinical trial.
• 84 patients were included.
• Patients will be randomized into two homogeneous groups.

• Using the Endoret® system for generating PRP, patients in study group underwent 3 subacromial injections of PRP under ultrasound guidance every 21 days.
• Patients in the placebo group were injected in the same manner with corticosteroids and local anesthetic. Following the injection, all patients undertook a standardized physical therapy.
MATERIAL AND METHOD

- To assess the results, we used specific tests for shoulder pathology. QuickDASH (disabilities of the arm, shoulder and hand, QD). Constant (CS) and UCLA scale (US).

- Patients were clinically re-evaluated at 3, 6 and 12 months post-injection.
• There were no statistically significant differences between groups at baseline.

• We have presented 5 cases of withdrawal, two patients of control group that were allergic to corticosteroids, one patient with rotator cuff tear and two significant pain during injection.
RESULTS

• Both 3, and at 6 months follow-up of patients treated with PRP presented significant clinical improvement in all the variables analyzed.
RESULTS

- At the end of follow-up patients of the study group present a 78% of improvement respect to 28% of the control group in Constant scale. In the study group, pain decreased and functionality improved significantly, CS 32.65 ± 1.97, US 14.25 ± 0.78, QD 35.92 ± 3; in control group the difference was less CS 12.47 ± 2.85, US 7.27 ± 1.01, QD 22.43 ± 3.58.
DISCUSSION

- In the last years there have been various studies with relevant results.
- Preliminary results indicate that a single PRP injection lead to improvements in pain, function, in patients with rotator cuff tendinopathy.
- However, there have been studies that question the usefulness of PRP in tendon injuries, not only in Achilles tendon injuries, but also in tendinopathy of the rotator cuff.

**Comparison of the therapeutic effects of ultrasound-guided platelet-rich plasma injection and dry needling in rotator cuff disease: a randomized controlled trial**

*Dong-wook Rha1, Gi-Young Park1, Yong-Kyun Kim1*

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**Outcomes After Ultrasound-Guided Platelet-Rich Plasma Injections for Chronic Tendinopathy: A Multicenter, Retrospective Review**

Kenneth Maunier, MD, Ricardo E. Colberg, MD, Gerard Malanga, MD, Joanne P. Borg-Stein, MD, Kimberly G. Harmon, MD, Aisha S. Dharamsi, MD, Samuel Chu, MD, Paul Homer

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**Platelet-Rich Plasma Injections in the Treatment of Chronic Rotator Cuff Tendinopathy**

A Randomized Controlled Trial With 1-Year Follow-up

Serdar Kesikbey, MD, Attila Keman Tan, MD, Elibe Yilmaz, MD
DISCUSSION

The use of Endoret® leads to a progressive reduction in the pain and improve the quality of life, and function of the patient at 12 months of follow-up. These findings suggest that platelet-rich plasma injections is safe and useful for rotator cuff tendinopathy.
REFERENCES


