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Proximal Anterior Rectus Femoris Myotendinous Tears: Treatment With Ultrasound Guided Platelet Rich Plasma Injections

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Faculty Disclosure Information

- Nothing to disclosure

Introduction

- Platelet-rich plasma (PRP) treatment has been used to shorten the time to return to sports in muscle injuries. Its use has been practically abandoned due to its lack of evidence and results.

- The involvement of connective tissue in muscle injury is a sign of a higher rate of recurrences and longer recovery time.

- One of the anatomical regions with the most connective tissue involvement is the proximal region of the rectus femoris muscle (RFM).

Objetive

The aim of this work is to report the clinical and imaging results of a group of patients with myotendinous injuries of the proximal rectus femoris muscle, treated with platelet-rich plasma.

M & M

Patients with muscle tears of the proximal (RFM) treated with ultrasound-guided infiltrations with PRP were prospectively evaluated.

Inclusion criteria

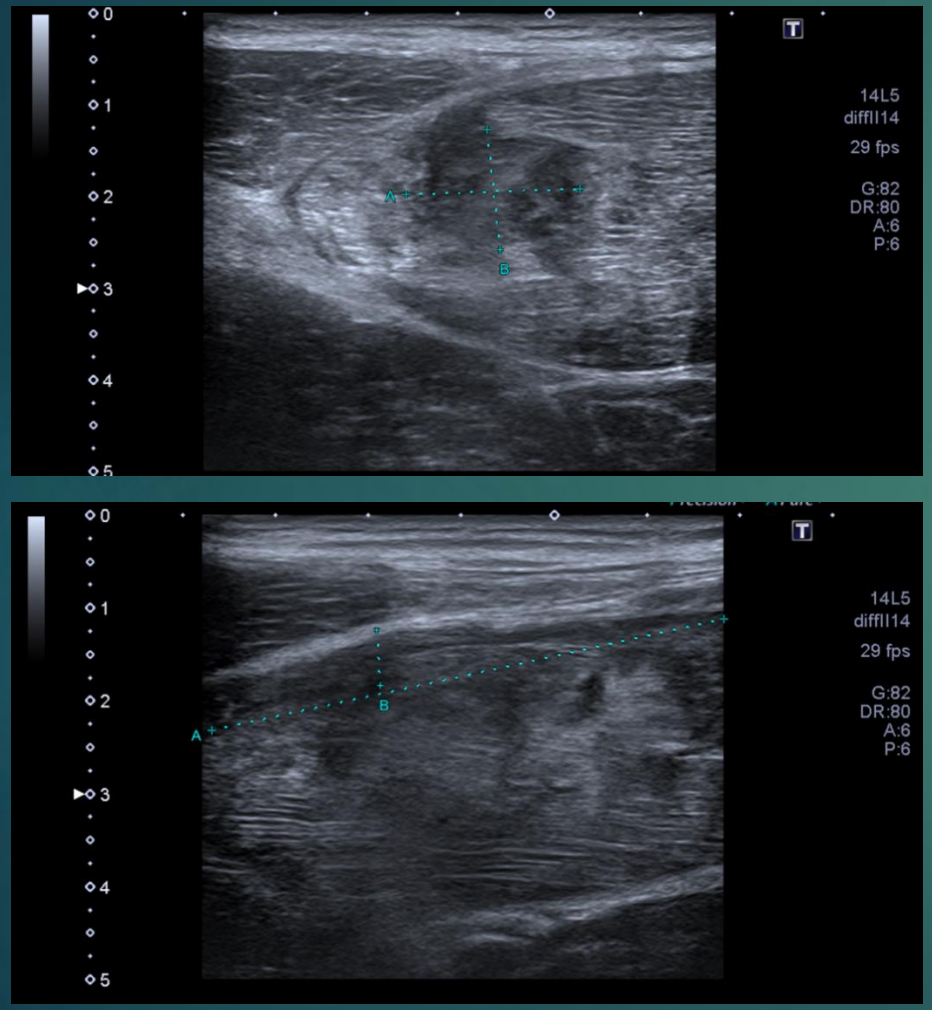
- Patients with RAP injuries involving tendons
- Athletes with recurrence or failure of conservative treatment (60 days)
- Competitive athletes

Exclusion criteria

- Patients for whom adequate follow-up could not be achieve
- Patients who did not comply with the rehabilitation protocol

Type of sport and injury mechanism were documented

Diagnosis made by Ultrasound & MRI



US & MRI of case #2: Complete proximal retracted rupture of the central tendon of the rectus femoris with 11 mm of fibrosis."

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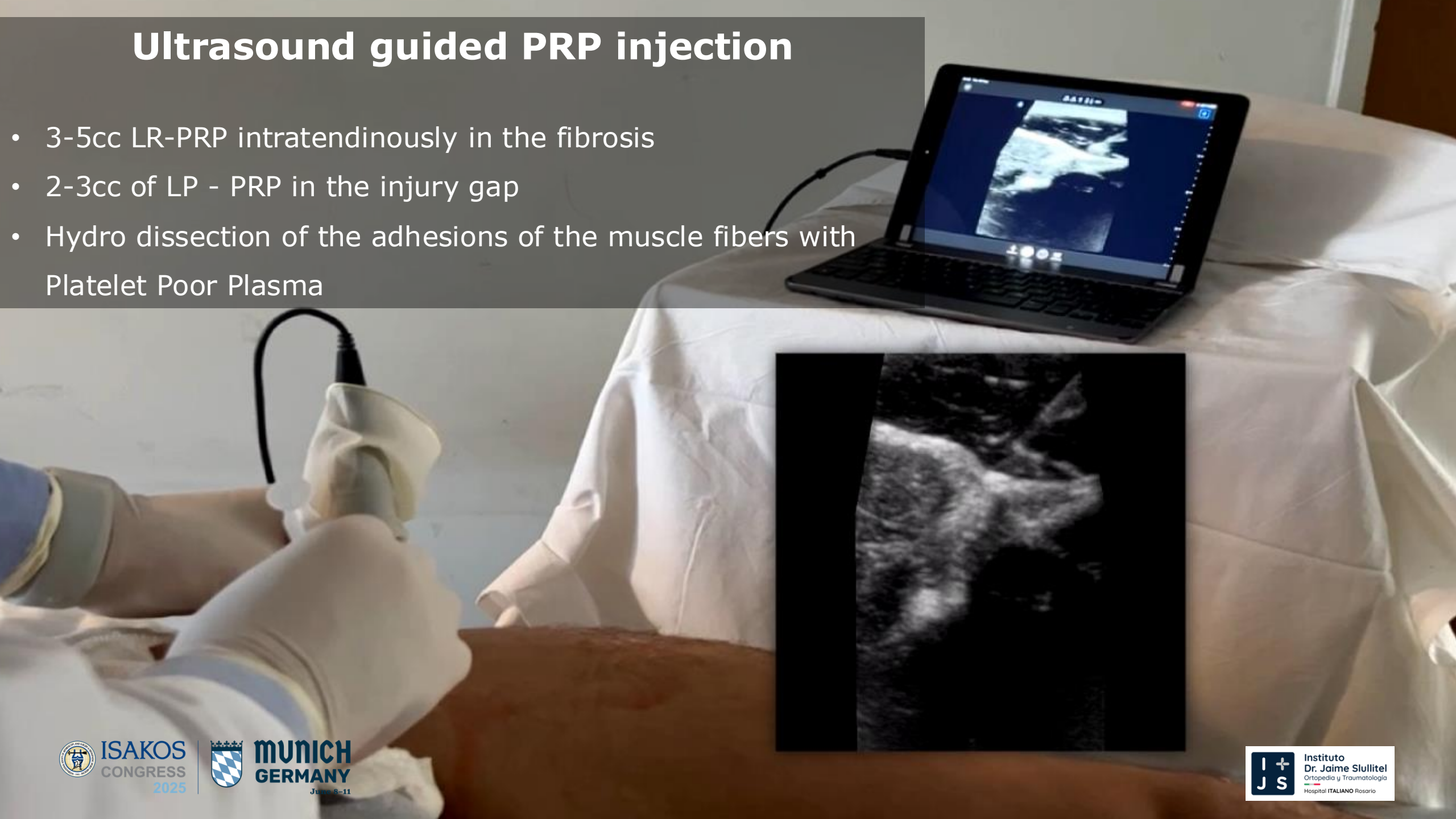
Ultrasound guided PRP injection

- 3-5cc LR-PRP intratendinously in the fibrosis
- 2-3cc of LP - PRP in the injury gap
- Hydro dissection of the adhesions of the muscle fibers with Platelet Poor Plasma



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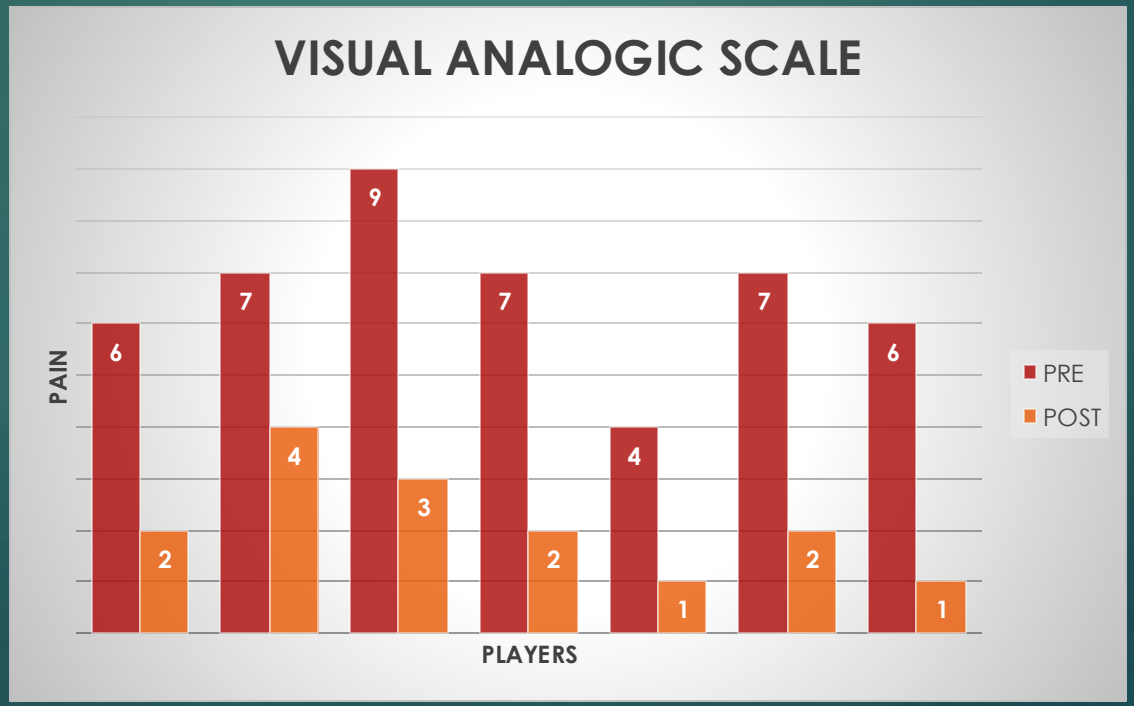
M & M

- After the procedure, the specific rehabilitation protocol begins
- Clinical and ultrasound controls were performed at 7, 15, 30 and 45 days and at medical discharge
- Functional pain according to VAS, time to return to running and return to sports, was documented
- An ultrasound and MRI were performed 6 months after treatment.

Results

- 7 patients (5 soccer players & 2 rugby players)
- Mechanism of injury: 4 kicking injuries and 3 acceleration injuries
- In 5 cases the proximal central tendon was affected and in 2 cases the conjoint tendon



Results

6 month MRI & US control:

Complete repair: 4 cases

Partial repair: 2 cases

Without repair: 1 case

MRI & US Control at 6 months: Same patient as in previous images, after 6 months of treatment with PRP, with complete repair of the central tendon of the rectus femoris.

Results

- **Return to sport:**
- Running: 26,3 days (20 -34)
- Competition: 48,2 (38-64)

- Recurrence:1 case

Conclusion

Considering all muscle injuries as a single pathology makes it very difficult to verify the effectiveness of PRP for their treatment.

Muscle injuries with myotendinous involvement, in addition to being more complex, are those that generate a higher incidence of fibrosis and its consequences.

As a weakness, we know that it is a short series without group control, but based on our experience, we believe that treatment with PRP is a valid and effective option for addressing proximal injuries of the rectus femoris in athletes that affect a tendon tissue and does not respond correctly to conservative treatment.

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