

# PRP Make You Jump, Jump: A Case of Sinding-Larsen Johansson Treated With Intraosseous PRP

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# Background History

- 19-year-old male college football player presents to clinic in NOV 2018
- Chronic right knee pain
- Recalcitrant patellar tendinopathy & Sinding-Larsen Johansson Syndrome
- Still with open growth plates
- Had failed to ultrasound guided Platelet Rich Plasma (PRP) injection to the patellar tendon



# History

- Pain initially started in early in 2017 football season
- Attempted relative rest, physical therapy (PT) and a counter force strap without no amelioration of symptoms.
- By NOV 2017 he underwent PRP (at outside clinic) as he continued to have 6-8/10 pain, then participated in PT
- Pain was with sport related activities as well as ADL's particularly ascending/descending stairs
- This continued for months, and he was redshirted the 2018 season. He eventually underwent MRI in OCT 2018, and was referred to our clinic



- Review of Systems
  - Negative other than Right Knee pain
- Past Medical & Surgical History
  - Unremarkable, no prior knee injuries or surgeries
- Family History
  - Non-contributory
- Social History
  - SEC football player



# Physical Exam

- Knee Exam:
- Mild valgus knee deformity. Otherwise, no visible joint deformity, quad atrophy, effusion, erythema or ecchymosis.
- Normal alignment.
- Tender to palpation over the proximal patellar tendon and inferior pole of patella.
- No crepitus. Full and pain free ROM.
- Ligaments: No valgus/varus laxity, Neg. Lachman's, Neg. posterior drawer.
- McMurrays: negative bilaterally.
- Patella: medial and lateral glide WNL, patellar grind negative.



# Test Results:



- Right Knee MRI - T2 SAG - OCT 2018: Demonstrated bone marrow edema in the lower pole of the patella, and increased signal in less than 25% of the cross-section width of the patellar tendon. Findings consistent with Sinding-Larsen Johansson Syndrome. MRI was otherwise normal.

# Diagnosis

- Sinding-Larsen Johansson Syndrome with a component of patellar tendinosis.



# Outcome

- Given the recalcitrant nature of the case, the decision was made to perform an interosseous PRP injection to the inferior pole of the patella to augment the healing process.
- PRP injected was 10x, leukocyte poor, with RBC's less than 1%, and no activation was used.
- After the procedure, the patient participated 1 month of physical therapy and underwent treatment with the school athletic trainer.





# Follow-up

- Three-month follow-up, he had no pain with day-to-day activity, including stairs.
- At that point, he started back to sport related activities.
- Six-month follow-up he was completely back to playing football, pain free.



# Follow-up Test Results:



- Right Knee MRI - T2 SAG – APR 2019: Similar to above with minimal diminution of lower patellar pole bone marrow edema. Also, still noted increased signal in less than 25% cross-section width of patellar tendon. Findings consistent with consistent with slightly improved Sinding-Larson Johansson.

# Discussion

- This type of traction apophysitis will usually resolve with 1-2 months of rest.
- However, recalcitrant cases can require surgical debridement to stimulate healing.
- Given the available recovery time, the decision was made to perform an interosseous PRP injection to the inferior pole of the patella to augment the healing process.
- Currently, there appears to be a paucity of literature on this type of treatment for SLJ.
- This purpose of presenting this case is propose a non-operative interventional orthopedic alternative.



# Questions

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