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Boston
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June 18–June 21

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HSS

Lateral Meniscal Posterior Root Repair with Concurrent ACL Reconstruction: Patient-Reported Outcomes and Risk Factors for Failure

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Disclosures:

Our disclosures can be found on the ISAKOS website.



Introduction

- Meniscal injuries are commonly encountered during anterior cruciate ligament reconstruction (ACLR).¹
- A lateral meniscal posterior root tear (LMPRT) is characterized by a tear within 1 cm of the insertion of the posterior root on the tibia, or an avulsion of the root itself.²
- A meniscal root injury leads to loss of the hoop stress distribution capacity of the lateral meniscus, effectively rendering the meniscus non-functional.³



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Purpose

- There has been an increased focus on identifying and repairing LMPRTs by bony reattachment of the root to its native footprint on the tibia.
- Purpose:
 - to evaluate the clinical outcomes after combined ACLR and lateral meniscus posterior root repair (LMPRR) using modern techniques at a high-volume center
 - To compare them to a matched cohort of patients undergoing ACLR with no lateral meniscal surgery at 2-year follow-up



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Methods

- All patients who underwent combined ACLR and LMPRR between January 2018 and February 2020 were identified in a single institution registry and matched to a control group of patients who underwent isolated ACLR on the basis of age and sex.
 - All autograft ACLRs
 - Exclusion criteria: history of revision ACLR, lateral extra-articular augmentation procedure, concomitant ligament reconstruction, knee osteotomy, and knee cartilage surgery



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Methods

- Patients were contacted at a minimum of 24-months post-operatively to evaluate patient reported outcomes
 - IKDC score, Marx Activity Rating Scale, SANE score, rate of return to sport, level of sports participation, rate of reinjury, and psychological readiness for return to sport.
- Psychological readiness was determined using a six-item questionnaire adapted from the Anterior Cruciate Ligament-Return to Sport after Injury (ACL-RSI) scale.



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Results

- Ten patients who underwent combined ACLR and LMPRR (6 male, 4 female) with a mean age of 21.9 years (range 15 to 36) were compared to 60 isolated ACLR patients with a mean age of 23.3 years (range 14 to 42)
 - minimum 2-year follow-up
- There were no statistically significant differences in post-operative IKDC ($P=0.99$), Marx ($P=0.23$), or SANE ($P=0.18$) scores between groups.



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Results

- Compared to pre-operatively, post-operative IKDC, Marx, and SANE scores improved significantly for both combined ACLR and LMPRR and isolated ACLR patients ($P < 0.01$).
- There were 80% of combined ACLR and LMPRR patients versus 73% of isolated ACLR patients who returned to sports participation ($P = 0.99$)
- No significant differences in the number of patients reporting participation at the same level of competition or higher between groups ($P = 0.39$).



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Results

- Mean ACL-RSI scale scores
 - No difference between combined ACLR and LMPRR (76.5 ± 22.5) and isolated ACLR (67.6 ± 25.8) patients ($P=0.37$)
- Confidence in ability to play sports
 - No difference between combined ACLR and LMPRR (89.4 ± 10.6) and isolated ACLR (81.7 ± 22.8) ($P=0.45$)
- No LMPRR patients underwent subsequent meniscus surgery.



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Discussion

- Combined ACLR and LMPRR resulted in similar patient reported outcomes compared to isolated ACLR without lateral meniscus surgery at early follow-up.
- Return to sport rates were high and patients returned to similar levels of competition compared to before injury in both groups.
- Psychological readiness for play was similar between groups and no differences were identified in confidence in ability to play sports.



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