Early Results of Combined ACL Reconstruction with a Lateral Extra-Articular Procedure from the New Zealand ACL Registry

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INTRODUCTION:

The addition of a lateral extra-articular procedure (LEAP) in primary anterior cruciate ligament reconstruction (ACLR) has increased to address rotational instability. Orthopaedic registries have made significant contributions to the improvement of patient outcomes through their ability to detect inferior results associated with specific surgical techniques. The aim of this study was to present the early results of combined ACL reconstruction with a LEAP from the New Zealand ACL Registry.

METHÓDS:

Prospective data recorded in the New Zealand ACL Registry were analyzed. Primary ACLR performed between May 2014 and June 2022 were included, allowing for a minimum follow-up of 1-year. Only cases using bone-patellar tendon-bone (BTB) or hamstring tendon autografts were analyzed. The primary outcome was revision ACLR. Secondary outcomes included the Marx activity score and the Knee Injury Osteoarthritis Outcome Score (KOOS). Analysis was stratified by graft type and compared between isolated ACLR (iACLR) versus ACLR with a LEAP (ACLR+LEAP). Statistical analysis was performed through a Chi-square test for binary outcomes and Mann-Whitney U test for continuous outcomes. RESULTS:

A total of 13735 primary ACLR were analyzed in which 491 had a LEAP. In the BTB cohort (n = 3874), 3584 underwent iACLR and 290 underwent ACLR+LEAP. There was 1 revision in patients who underwent an ACLR+LEAP with a BTB autograft (0.3%), compared to 112 revisions in patients who underwent iACLR with a BTB autograft (3.1%, p = 0.003). In the hamstring cohort (n = 9861), 9660 underwent iACLR and 201 underwent ACLR+LEAP. Four patients who underwent ACLR+LEAP with a hamstring tendon autograft underwent a revision (2.0%) when compared to 541 patients who underwent iACLR with a hamstring tendon autograft (5.6%, p = 0.027). In both the BTB and hamstring cohorts, similar Marx activity (p>0.05, Figure 1) and KOOS scores (p>0.05, Figure 2 and 3) were reported at 2-year follow-up when comparing iACLR and ACLR+LEAP.

DISCUSSION AND CONCLUSION:

Early data demonstrates a lower revision rate when ACLR using either BTB or hamstring autograft is combined with a LEAP. Similar PROM scores were reported at 2-year follow-up between iACLR and ACLR+LEAP.

