

FIRST LONG-TERM OUTCOMES OF SELECTIVE MODERN-DAY ACL PRIMARY REPAIR AT MINIMUM 10-YEAR FOLLOW-UP.

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INTRODUCTION:

The resurgence of interest in the preservation of the anterior cruciate ligament (ACL) has led to an increasing number of studies reporting outcomes at short- to mid-term follow-up. However, the question remains whether promising outcomes of modern-day ACL primary repair (ACLPR) can be sustained at long-term follow-up after historic techniques presented high failure rates at long-term follow-ups.

The objective of this study was to evaluate survival rates of ACL primary repair at a minimum 10-year follow-up to determine if the previously reported rates at short to mid-term follow-up can be sustained.

METHODS: This preliminary analysis of the first 16 consecutive patients with proximal ACL tears undergoing ACL primary repair with dual suture anchor fixation by a single surgeon, spanned from 2008 to 2014. The indication for ACLPR was determined intra-operatively if a proximal type I tear and good to excellent tissue quality were present. Patients were considered for inclusion if they had a minimum of 10-year follow-up data available. Primary outcomes included failure and re-operation rates, while secondary outcomes comprised patient-reported outcome measurements (PROMs; International Knee Documentation Committee (IKDC) subjective score, Lysholm score, Forgotten Joint Score (FJS), and Anterior Cruciate Ligament Return to Sport after Injury (ACL-RSI) score, and pre- to post-operative Tegner Activity Scale Difference), as well as the anterior-tibial translational side-to-side difference (ATT SSD) to assess clinical knee laxity.

RESULTS:

Outcomes for 16 patients (mean \pm SD (range), 38.2 \pm 11 (21-57) years of age) were recorded at final follow-up (mean \pm SD, 11.6 \pm 2 (10-16) years). Two patients (11%) were lost to follow-up, with 1 patient being unreachable and 1 patient declining further evaluation. At minimum 10-year follow-up two patients reported a traumatic ipsilateral ACL reinjury (12.5%), while two patients had to undergo reoperation (12.5%), with one patient undergoing meniscal repair and one patient contralateral ACL surgery. PROMs at the final follow-up demonstrated excellent outcomes and no significant differences when compared to results at 2- and 5-year follow-ups (IKDC, 94.5 \pm 7, p = .718; Lysholm 93.8 \pm 11, p = .410; Tegner difference -0.5 \pm 2, p = .274). The FJS and ACL-RSI score were only assessed at final 10-year follow-up and demonstrated good to excellent results, with 91.3 \pm 15 and 79.3 \pm 28, respectively. Lastly, ATT SSD was presented with 0.9 \pm 1mm, with no patients exceeding >3mm ATT SSD.

DISCUSSION AND CONCLUSION:

The results of this first long-term follow-up of patients treated with selective modern-day ACLPR demonstrated acceptable failure and reoperation rates, along with excellent PROMs and clinical knee laxity measurements at a minimum 10-year follow-up.