ligamentous injured knee (MLIK). Potential disadvantages of delayed treatment of concomitant injuries include longer time to surgery and residual valgus laxity, whereas acute sMCL repair has potential to address these issues. The purpose of this study was to assess short-term outcomes of acute MCL repair. Methods: A retrospective analysis of MLIK patients with grade III MCL injuries, who underwent acute (<6 weeks) MCL repair, and had at least two-year follow-up, was completed. Physical examination at minimum six months and patient-reported outcome measures (PROMs) at minimum two years were utilized to assess patient status. Continuous variables were reported in median with interquartile range (IQR). Results: Twenty-six patients were included with median follow-up of 4.2 years. Valgus laxity was negative in 22 patients (91.7%), grade one in two (8.3%), and there were no MCL failures. Three patients (11.5%) required reoperation, one (3.8%) for arthrofibrosis, one (3.8%) for MCL hardware removal, and one (3.8%) for unicondylar knee arthroplasty. ACL failure was seen in four patients (16.0%), and PCL failure in one (10%). PROMs were excellent with median Lysholm 95.0 (IQR 90.0–100.0), modified Cincinnati Score 89.0 (IQR 84.0–96.0), SANE 90.0 (IQR 80.0–95.0), preinjury Tegner 6.0 (IQR 5.0–6.0), Tegner at follow-up 5.0 (IQR 4.5–6.0), IKDC Subjective Score 82.8 (IQR 79.3–89.7), FJS 77.1 (IQR 67.7–91.7), and ACL-CSI 72.7 (IQR 42.5–81.9). Conclusions: In this heterogeneous cohort of MLIK patients, outcomes of acute percutaneous MCL repair were encouraging with excellent stability and PROMs. MCL repair seems to reliably result in valgus stability, without additional risk of arthrofibrosis and need for additional grafts or risk of tunnel convergence and should be considered in the MLIK when possible.

Category: Knee - Ligaments (Not ACL)

Determining of Patient Acceptable Symptom State and Evaluation of Work and Sports Impact After Multiligament Knee Reconstruction

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Summary:
This study defined the PASS threshold value for the subjective IKDC and Lysholm as 67.9 and 80. Predictor of achieving PASS was low intensity trauma. Modern surgical techniques after multiligament knee injuries allow return to work without modification in most cases dependent on the work heaviness. Return to low-intensity sports was feasible for patients practicing regular activity before injury. Data: Multi-ligament knee injuries have a significant functional impact for the patient. Parameters such as Patient Acceptable Symptom Status (PASS) are new measures to assess patient satisfaction and improve interpretation of patient-reported outcomes measurements (PROMs). In addition to the subjective scores, assessment of return to activity is an important issue. The primary purpose of this study was to determine the PASS threshold value for the subjective IKDC and Lysholm scores after multiligament reconstruction with a minimum follow-up of 12 months. The secondary objectives were to determine the predictive factors for achieving this value, to assess impact on professional activity according to heaviness and on return to sport. A retrospective, single-center analysis was conducted on patients treated for knee dislocation (07/2008-12/2019). 42 patients were assessed with a follow up compliance of 85.7%. All patients had knee ligament repair and/or reconstruction with allograft and autograft according to treatment algorithm. Clinical data and postoperative complications were collected at the last follow-up consultation. IKDC subjective knee and Lysholm scores were performed. PASS threshold value was calculated using an anchoring method. Multivariate logistic regressions were conducted to determine predictors of achieving PASS. A self-questionnaire was given to the patient to assess impact on work and sports. Activities were classified according to Tegner scale. With a mean follow-up of 4.8 years, 78.6% of the patients reported satisfactory symptom status. No significant difference was observed between patients who answered "yes" and those who answered "no" to the PASS question showed. Expect for PROMs, IKDC was 75.2 points for patients who answered "yes" to PASS question versus 61.4 for those who answered no (p = 0.003) and a mean Lysholm score of 86.2 points versus 71.6 (p=0.002). The PASS cutoff for the cohort was defined at 67.9 for the IKDC and 80 for the Lysholm score. A multivariate logistic regression according to the achievement of this threshold value defined that low-intensity trauma was a predictor of achieving this value for the subjective IKDC (Odds Ratio 10.507, 95% CI 1.074 to 102.839, p = 0.043). 34 patients (81%) had returned to work without job modification, 7 (16.7%) patients required job adjustment and 1 (2.4%) patient was classified as invalid. Patients in light work returned to work significantly more without modification than heavy work group (p = 0.038). Pre-injury, 30 (71.4%) patients were practicing sports. At the last follow-up, 25 (59.5%) patients were involved in sports. 25/30 (83.3%) patients practicing sports had resumed sports but at a lower level before the injury (Tegner: before injury 5.2 vs after reconstruction 4.4; p = 0.014) This study defined the PASS threshold value for the subjective IKDC and Lysholm as 67.9 and 80, with a minimum follow-up of one year. Predictor of achieving PASS for subjective IKDC score was low intensity trauma. Modern surgical techniques after multiligament knee injuries allow return to work without modification in most cases. However, this remains dependent on the work heaviness. Furthermore, return to low-intensity sports was feasible for patients practicing regular activity before injury.

Category: Knee - Ligaments (Not ACL)

Poorer Functional Outcomes in Patients with Multi-Ligamentous Knee Injury with Concomitant Patellar Tendon Ruptures At 5-Years Follow-Up: A Multicenter Study

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Summary:
Using propensity score matching, the purpose of this study was to compare the outcomes of MLKIs with and without patellar tendon ruptures and to investigate the overall predictors of these outcomes. Data: Purpose: Multi-ligamentous knee injuries (MLKIs) are high energy injuries that may infrequently present with concomitant patellar tendon rupture. There is limited information in the literature regarding these rare presentations, with even less information regarding clinical outcomes. Using propensity score matching, the purpose of this study was to compare the outcomes of MLKIs with and without patellar tendon ruptures and to investigate the overall predictors of these outcomes. Methods: Twelve patients who underwent surgical repair for combined MLKI and patellar tendon rupture from February 2011 to April 2020 with minimum 1-year follow-up data were identified from two separate institutions. Patients were propensity-score matched with a 1:1 ratio with controls based on age, body mass index (BMI), gender, and time from surgery. Patient-reported outcomes included International Knee Documentation Committee (IKDC) Subjective Knee Form, Lysholm and Tegner scores, Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) score. Results: Twelve MLKIs with concomitant patellar tendon injuries were identified out of a multi-center cohort of 237 (5%) patients sustaining MLKI and were case matched 1:1 with 12 MLKIs without extensor mechanism injuries. The average follow up was 5.5 ± 2.6 years. There were no differences in Snekchin Classification injury pattern. There were significant differences found across IKDC (Patellar Tendon mean: 53.1 ± 24.3, MLKI mean 79.3 ± 19.6, P<0.001) and Lysholm scores (Patellar Tendon mean: 63.6 ± 22.3, MLKI mean 86.3 ± 10.7, P<0.001) between the two, illustrating poorer outcomes for patients with concomitant patellar tendon ruptures. Conclusion: In the setting of MLKI, patients who have a concomitant patellar tendon rupture have worse functional outcomes compared to those without. This information will be important for patient counseling and might be considered to be added to Snekchin classification, reflecting its prognostic value.

Category: Knee - Ligaments (Not ACL)

Fibular Versus Tibiofibular-Based Reconstruction of The Posterolateral Corner Of The Knee: A Systematic Review and Meta-Analysis

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