

month follow-up, 42 completed Lysholm and IKDC questionnaires and the average reported scores are 84.9 and 74.5%. No correlation between 6-month outcome scores and pre-operative expectations has yet to be shown.

Conclusion: When using validated outcome measures to determine expectations, patients have higher expectations than surgeons with regard to ultimate function and pain after ACLR. This study is the first to assess the differences in expectations of patients v. surgeons prior to ACLR. Further data collection will determine if any correlation of expectation to ultimate outcome is observed.

Does Proximal-Distal Tibial Tunnel Placement for PCL Reconstruction Matter?

SS-20

April 14, 2:05 PM

SCOTT KAAR, M.D., PRESENTING AUTHOR

UGOCHI OKOROAFOR, M.D.

FABIENNE SAINT-PREUX, B.S.

STEPHEN GILL, B.S.

Introduction: The purpose of this study was to investigate the biomechanical effects of proximal-distal tibial tunnel placement on posterior laxity in PCL reconstruction.

Methods: Eighteen human cadaveric knees were studied, consisting of nine matched pairs. Transtibial PCL reconstruction was performed using a simulated arthroscopic technique. The native PCL was resected, and Achilles tendon autografts were used for PCL reconstruction. The specimens were divided into two groups based on tibial tunnel placement: 1) anatomic tunnel and 2) non-anatomic tunnel. The anatomic tibial tunnel was placed at the footprint of the PCL, 1 cm distal to the joint line, while the non-anatomic tibial tunnel was placed more proximal to this, at the joint line. A 150-N cyclic posterior tibial load was applied using a Materials Testing System (MTS) machine at 0°, 30°, 60°, and 90° of knee flexion. In 10 specimens, a static 250-N posterior tibial load was applied at 90° of knee flexion. Posterior tibial translation in the sagittal plane was recorded. A Mann-Whitney U test was used to compare posterior tibial translation between the two groups. Statistical significance was set defined as $p < 0.05$.

Results: With application of a 150-N posteriorly directed cyclic force, the anatomic tunnel group demonstrated significantly less posterior tibial translation than the non-anatomic tunnel group at 0°, 30°, 60°, and 90° of knee flexion ($p < 0.05$). The anatomic tunnel group also demonstrated significantly less posterior tibial translation than the non-anatomic tunnel group at 90° with a static 250-N posteriorly directed force applied ($p < 0.05$).

Conclusion: Anatomic distal tibial tunnel placement recreating the tibial origin of the PCL provided significantly greater restraint to posterior tibial translation than proximal non-anatomic tunnel placement. We recommend careful placement of an anatomic distal tibial tunnel during PCL reconstruction for avoidance of posterior laxity.

Predictors of Recurrent Patellar Instability in Children and Adolescents following First-Time Dislocation

SS-21

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BRADLEY JAQUITH, M.D., PRESENTING AUTHOR

SHITAL PARIKH, M.D.

Introduction: The purpose of the study was to examine risk factors in patients with first-time patellofemoral dislocations to develop a prediction model of recurrence.

Methods: A single institution retrospective review of all patients with a first-time patellofemoral dislocation from 2002 – 2013 was performed. Demographic risk factors (age, gender, laterality, mechanism of injury, and history of contralateral patellar dislocation) and radiographic risk factors (increased patella height, trochlear dysplasia, and skeletal immaturity) were examined. Patella height was measured using Caton-Deschamps index. Trochlear dysplasia was assessed using the two-grade Dejour classification and skeletal immaturity was assessed based on the distal femur and proximal tibia physis (open, closing, or closed).

Results: 266 knees in 250 patients were included in the study. Of these, 222 (83.5%) were treated nonoperatively and 44 (16.5%) were treated surgically. Of the knees treated nonoperatively, 77 (34.7%) had a recurrence. Significant risk factors for recurrence on univariate analysis were age ≤ 14 years, history of contralateral patellar dislocation, trochlear dysplasia, skeletal immaturity, and a Caton-Deschamps index > 1.45 . Multivariate analysis was performed and trochlear dysplasia and skeletal immaturity were the most significant factors with odds ratios of 3.56 and 2.23 respectively. The presence of all four multivariate risk factors (CDI > 1.45 , history of contralateral patellar dislocation, trochlear dysplasia, and skeletal immaturity) had a predicted risk of recurrence of 88%. The presence of any three risk factors had a predicted risk of about 75% and the presence of any two risk factors had a predicted risk of about 55%.

Conclusion: Trochlear dysplasia, skeletal immaturity, CDI > 1.45 , and a history of contralateral patellar dislocation were all significant risk factors for recurrence in patients with first-time patellar dislocations. A predictive model for calculation of recurrence risk was developed. This information is useful when counseling patients and their families following first-time patellar dislocation about prognosis.

The Anatomic Midpoint of the Anterior Attachment of the Medial Patellofemoral Complex

SS-22

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MIHO TANAKA, M.D., PRESENTING AUTHOR

ANDREAS VOSS, M.D.

JOHN FULKERSON, M.D.

Introduction: The reconstruction of the medial patellofemoral ligament (MPFL) and medial quadriceps tendon