medial collateral ligament/posteromedial corner, and lateral collateral ligament/posterolateral corner (LCL/PLC). Exclusion criteria included isolated PCL-R, PCL repair and missing surgical data with respect to any variable. Patients were dichotomized into early and delayed surgery groups based on whether time elapsed between injury and surgery was shorter or longer than 12 weeks. Demographics, injury mechanism, and concomitant ligament, meniscus, and cartilage injury data were extracted. Between-group comparisons of categorical variables were conducted with Chi-square or Fisher’s exact tests, and continuous variables were compared with independent samples t-tests. Post-hoc comparisons were adjusted for multiplicity with the Bonferroni-Hochberg procedure.

Level of significance was set at p<0.05. Results: A total of 148 patients were deemed eligible for analysis. There were 57 (38.55%) patients in the early multiligament PCL-R group, and 91 (61.5%) patients in the delayed multiligament PCL-R group. The mean time from injury to surgery was 6.3±1.1 weeks in the early PCL-R group, compared to 63.7±11.3 weeks in the delayed PCL-R group. While concomitant LCL/PLC reconstruction was performed in 55 (60%) of delayed multiligament PCL-Rs and 23 (40%) of early PCL-Rs (p=0.02), there was no significant between-group differences in the frequencies of other concomitant ligament surgeries performed. There were no significant differences in the prevalence of meniscus tears between the early (n=28,49%) and delayed (n=36,40%) multiligament PCL-R groups (p=0.25). Concomitant meniscus surgery was significantly more prevalent in the early (n=25,44%) versus delayed (n=19,21%) multiligament PCL-R group (p=0.005), with a significantly greater proportion of medial meniscus surgeries performed in the early (n=16,28%) compared to delayed (n=13,14%) PCL-R group (p=0.04). The prevalence of knee cartilage injury was significantly different between the early (n=12,24%) and delayed (n=41,46%) multiligament PCL-R groups (p=0.01), with a more frequent involvement of the lateral (n=17,19% vs. n=3,5%, respectively; p=0.04) and medial (n=31,34% vs. n=6,11%, respectively; p=0.005) femoral condyles in the delayed compared to the early PCL-R group. Conclusion: Patients undergoing delayed multiligament PCL-R demonstrated a higher rate of cartilage pathology, specifically of the lateral and medial femoral condyles, when compared to patients undergoing early PCL-R. Delayed multiligament PCL-R may lead to increased chondral damage, potentially due to knee instability. Despite similar rates of medial meniscus injury in both groups, medial meniscus surgery is more prevalent in early multiligament PCL-R and suggests that surgical timing may impact the treatability of concomitant meniscus pathology. Additionally, acute management of instability in this population may prevent the development of postero-lateral knee instability.

Mean external rotation laxity in the 3 groups was not significantly different when dial test at 30° of knee flexion was quantified on intact knees (p=.32) or after sectioning the PAPL (p=.15). After PLC reconstruction, the modified Larson technique was found to be significantly less effective to restore rotational stability compared with VR and LR (p=.025). Discussion: The VR provides similar outcomes to the LR for restoring stability in varus and external rotation. This study reported that the 2 so-called anatomic reconstruction procedures (VR and LR) were significantly more effective than the modified Larson for external rotation control. Consequently, it remains preferable to use anatomic techniques in multiligament injuries involving the PLC.

Category: Knee - Ligaments (Not ACL)

“Does Posterior Slope Lead To PCL Injury In Knee? And Effect Of Posterior Slope On The Outcome Following PCL Reconstruction?’

Abstract ID# 22917
All Authors:
S R Sundararajan MS(Orth) INDIA
S Rajasekaran MS(Orth), DO, orth DNBR, FRCS(Ed), FRCS(Lon), MCh(Liv), PhD INDIA

Summary:
DECREASED POSTERIOR TIBIAL SLOPE IS ASSOCIATED WITH INCREASED RISK FOR PCL INJURIES AND NEGATIVE IMPACT ON CLINICAL OUTCOME AFTER PCL RECONSTRUCTION AND LEADS TO POSTERIOR LAXITY OF KNEE.

Data:
Introduction: Aim of our study is to evaluate the effect of posterior Tibial slope on radiological and functional outcome following PCL reconstruction in isolated PCL injuries. And to evaluate the incidence of variation of PTS angle in patients with isolated PCL injuries and to analyze the effect of Posterior Tibial Slope Angle on radiological and functional Outcome of PCL Reconstruction. Methods: In our retrospective study, we included 171 patients of isolated PCL injuries to evaluate the incidence of variation of PTS angle, among these 60 patients were PCL tears and 111 patients were PCL avulsions. These 60 PCL tears patients who underwent Isolated PCL reconstruction were grouped into Group-A (PTS < 70) and group-B (PTS > 70) based on PTS angle, taking 70 as threshold value. These two groups were compared to evaluate and analyze the effect of PTS angle on radiological outcome at 6-months and 1-year, and functional outcome using IKDC and Tegner Lysholm score, Knee Range of Motion at 6-months, 1-year, and mean follow-up. Results: In our study we found that, mean PTS angle was 6.640 ± 2.70, 62 % of patients with Isolated PCL injury had PTS of < 70. On comparison between Group-A and group-B population, we found that radiological posterior laxity at 1 year was more in group-A as compared to group-B which was statistically significant. Functional outcome with IKDC and Tegner Lysholm showed lower scores in group-A as compared to group-B at mean final follow-up and group-A patients had decreased range of movements compared to Group-B at 1 year and mean follow-up, and the difference was statistically significant. Conclusion: Decreased posterior tibial slope is associated with increased risk for PCL injuries. And Decreased PTS has negative impact on clinical outcome after PCL reconstruction and leads to posterior laxity of knee. Key words: PCL, Posterior slope, Posterior cruciate ligament, Knee ligament

Category: Knee - Ligaments (Not ACL)

Clinical and Patient-Reported Outcomes of Acute Percutaneous Repair of Medial Collateral Ligament in the Multiligamentous Injured Knee

Abstract ID# 21391
All Authors:
Kurt S. Holuba BA UNITED STATES
Harmen D. Vermesjden M.D. UNITED STATES
Xiuyi A Yang M.S. UNITED STATES
Robert O'Brien MHIS, PA-C UNITED STATES
Jelle P. van der List MD, PhD NETHERLANDS
Gregory S. Delforce MD UNITED STATES

Summary:
Acute MCL repair in the setting of multiligamentous knee injuries results in minimal valgus laxity, minimal complications, good subjective outcomes and excellent stability at short-term follow-up.

Data:
Introduction: It is unclear whether to treat grade III superficial medial collateral ligament (sMCL) tears nonoperatively or operatively in the setting of a multi-