



# Combined Posterolateral Corner and Acute Anterior Cruciate Ligament Injuries in a Pediatric Cohort

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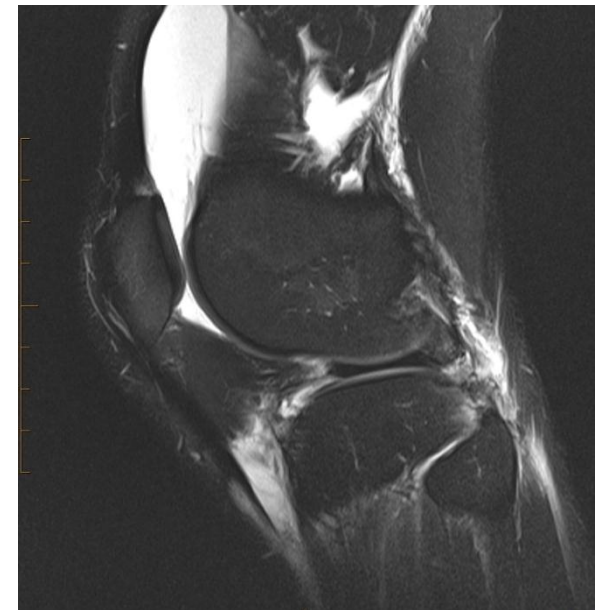
# Background

- ACL disruptions are not infrequent injuries in pediatric patients
- Untreated PLC injury is an identified cause of failed ACL reconstruction
  - Increased varus translation in mid-flexion  
(LaPrade et al. *AJSM*. 2004)
- Incidence of combined ACL, PLC injuries range from 5-14.7% in adult literature



# Material and Methods

- Retrospectively reviewed MRI studies over 4 year period identifying all ACL disruptions
- Inclusion: complete ACL injury with PLC injury
- Exclusion: prior ACL reconstruction, partial ACL disruption, tibial spine avulsion, isolated Grade 1 or 2 LCL injury



# Material and Methods

- **Data**
  - Age, Gender, Associated Injuries, Skeletal Maturity
- **Control Group**
  - ACL injuries without concomitant PLC injury
- **Statistics**
  - Chi-square test
  - Logistic Regression



# Results

- 128 patients identified with an ACL disruption (74 M, 54 F; average age 15.2 years)
- Concomitant PLC injury in 13.3%
  - 17 patient (13 M, 4 F; average age 16.1 years)
- Lateral meniscal pathology
  - occurred more often with combined ACL, PLC injuries ( $p=0.02$ )
  - predictive of PLC injury by logistic regression analysis ( $p=0.05$ , Odds Ratio=4.43)



# Discussion

- **Unrecognized PLC injury is an identified cause of ACL reconstruction failure**
  - **Significantly less anterior tibial translation with concomitant reconstruction (Kim et al. *JBJS*. 2012)**
- **Lateral meniscal injury was predictive of concomitant PLC injury**



# Conclusion

- Combined ACL and PLC injury was identified in **13.3%** of patients
- Lateral meniscal injury in association with an ACL disruption was predictive of concomitant PLC injury



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