Ep 11 Posterolateral Corner Injuries- Dr. Jorge Chahla Notes-

History/Physical

- Account for up to 16% of all knee ligament injuries; commonly associated w/ cruciate ligament injuries
- 28% occur in isolation

- *Mechanism*

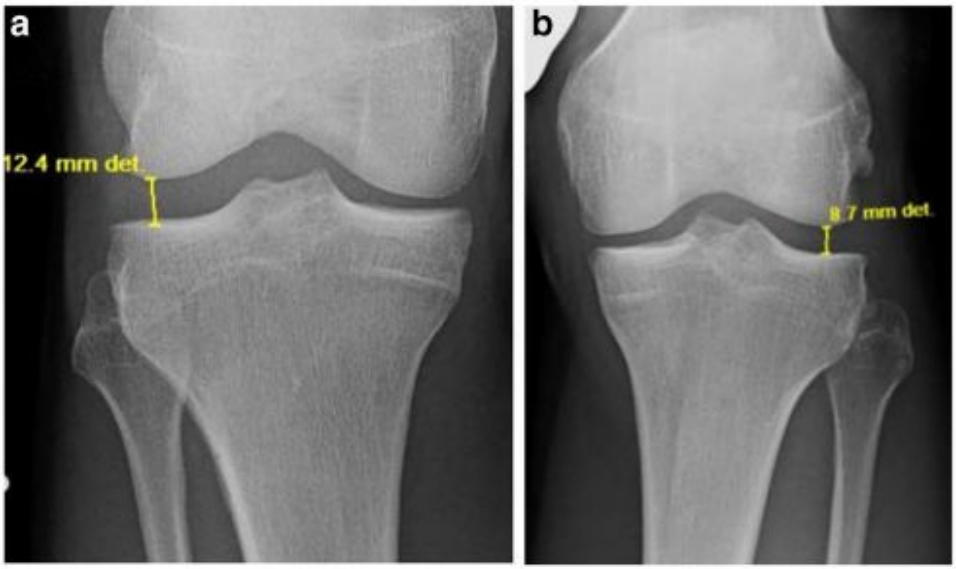
  Athletic trauma, MVA, and Falls
  - Posterolateral-directed force to the anteromedial tibia, knee hyperextension, and/or severe external rotation of the tibia while the knee is partially flexed

- Presents w/ pain over posterolateral aspect of the knee
- Perceived side to side instability near extension
- Posterolateral rotary instability
- Difficulty walking on uneven ground
- Ecchymosis and swelling
- Foot drop

Physical Exam

- Lachman test
- Pivot shift
- Dial test at 30 degrees and 90 degrees
- Posterolateral drawer test w/ knee at 90 of flexion and 30 of external rotation
- Varus stress exam at 0 degrees and 30 degrees

Imaging



Plain Radiographs

- AP and bent knee patellofemoral radiographs
- Bilateral varus stress radiographs - (Both reliable and reproducible method to evaluate the severity of PLC lesions)
- MRI to evaluate ligamentous structures
    a. notice bone bruises - frequently found w/ acute isolated and combined PLC injuries
    b. (90% sensitivity and specificity for IT band, biceps tendon, FCL, and popliteus tendon injury)
    c. Look for associated ligamentous tears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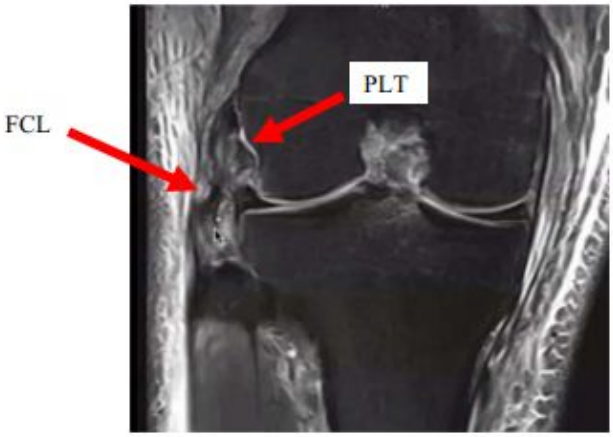
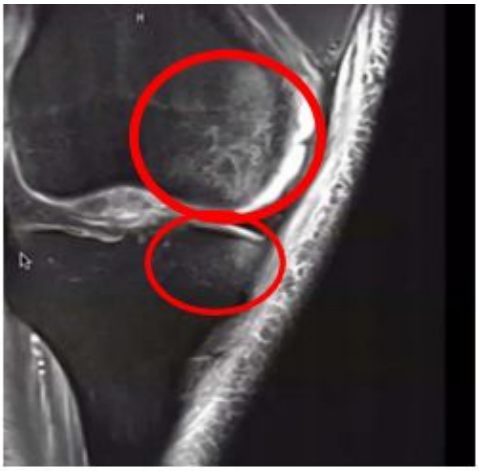
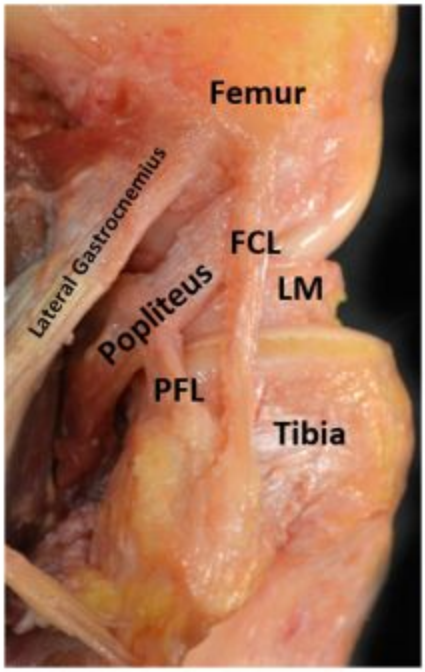

FCL
PLT



Anatomy


Femur
Lateral Gastrocnemius
FCL
LM
Popliteus
PFL
Tibia

- Account for up to 16% of all knee ligament injuries; commonly associated w/ cruciate ligament injuries
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- Provides primary restraint against varus translation and resist posterolateral rotation of the tibia relative to the femur

3 Main Stabilizers

a. Fibular Collateral Ligament (FCL)
    - Primary varus stabilizer of the knee
b. Popliteus Tendon (PLT)
c. Popliteofibular Ligament (PFL)

Secondary Structures

- Help stabilize the knee in a static and dynamic manner

a. Midthird lateral capsular ligament
b. Coronary ligament of the lateral meniscus
c. Lateral gastrocnemius tendon
d. Fabellofibular ligament
e. Long head of the biceps femoris
f. Iliotibial band (ITB)
g. Anterolateral ligament (ALL)

Classification

Hughston scale - amount of perceived carus stress opening when compared to contralateral limb

- Grade I: 0-5 mm or 0-5 degrees -- Minimal ligament tearing with no abnormal motion
- Grade II: 6 - 10 mm or 6-10 degrees -- Partial tearing w/ slight/moderate abnormal motion
- Grade III: > 10mm or > 10 degrees -- Complete tearing w/ marked abnormal movements
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Treatment

Nonop

- Positive results with consevative management and early mobilization of grade I or II isolated PLC injuries

Operative

- Should be performed within 3 weeks of injury
    a. Failure to address the PLC immediately leaves the ACL graft under increased tension
    b. Acute reconstruction allows for the native anatomic landmarks to be properly identified
- Reconstruction of the PLC has been shown to have superior results compared to repair
- Single stage surgery of PCL injury w/ concurrent cruciate injuries has shown to have lower failure rate compared to multi-staged construction

Reconstruction w/ an Achilles tendon allograft or semitendinosus autografts

Procedure often performed with open hockey stick incision to lateral knee

Various techniques available to repair injury; Refer to article for technique

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References:

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