Ep 13 ACL Injuries Intro - Dr. Nicolas Bonnaig Notes-

History/Physical

- Pain and Swelling
- Effusion
- Gait
- ROM of the knee

Lachman Test

- Most clinically sensitive exam for a complete ACL rupture

Pivot shift Test

- Easily done w/ patient under anesthesia
- Most specific physical exam finding that correlates with return to play of the level 1 athlete

Anterior Drawer Test

Tests for Examination of the Knee. Dr. Nabil Ebraheim- https://youtu.be/c3643PM0a2o

Associated injuries:
Meniscus tears, osteochondral lesions, and collateral ligament injuries

60% - 75% associated with meniscus tears
46% have collateral ligament injuries

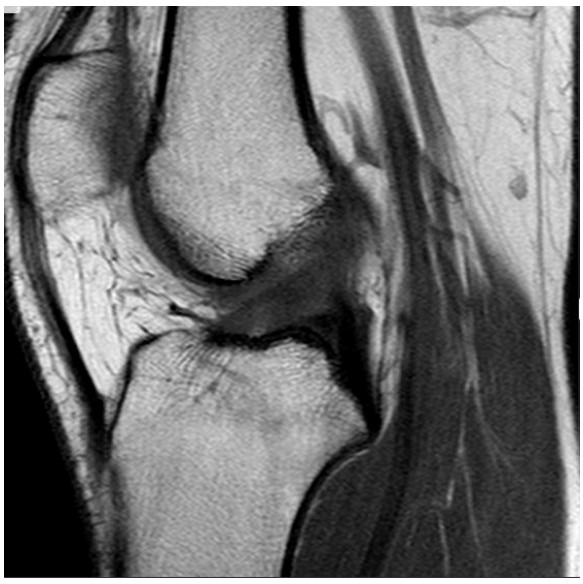
Imaging

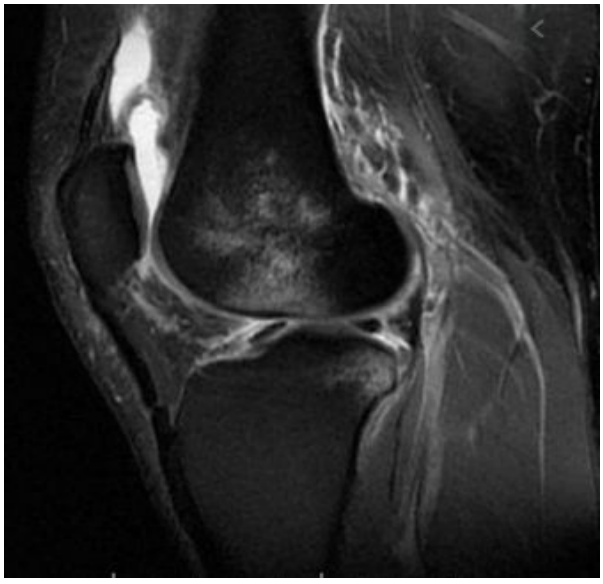
Plain Films

- Knee films (AP, Lateral, Tunnel, and sunrise views)
- Assess for fractures, evaluate knee alignment , determine skeletal maturity, identify degenerative changes

MRI

- Primary study used to diagnose ACL injury
- Sensitivity - 86% Specificity- 95%
- Assess meniscus injury, collateral ligament tears, and bone contusions





Anatomy

Anteromedial bundle

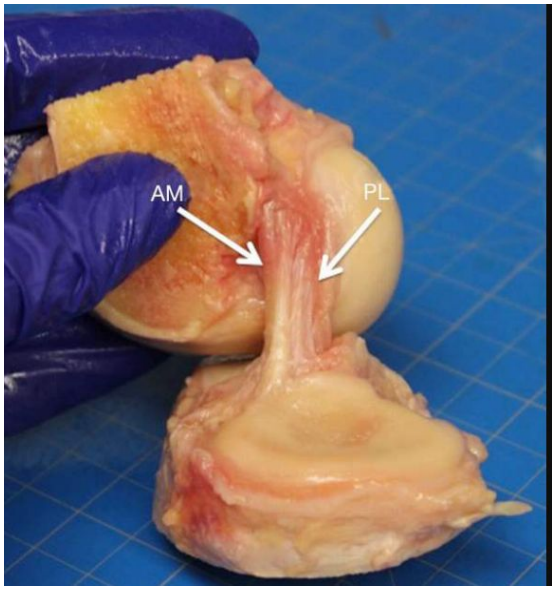
- Tightens in flexion
- Femoral origin is anteroproximal in the intercondylar notch and inserts anteriorly and medially within the anterior intercondylar area of the tibia

Posterolateral bundle

- Tightens in extension, internal, or external tibial rotations
- Originated posteriorly in the notch and inserts posteriorly and laterally within the anterior intercondylar area of the tibia

- In extension, the bundles are oriented vertically and are parallel to one another. In flexion, the bundles are oriented horizontally and the bundles are crossed

- Lateral bifurcate ridge separates the origins of the anteromedial and posterolateral bundles and is found in 30% of patients



Treatment

Non-operative management

- Bracing
- Rehabilitation
- More sedentary low demand individuals who are not as active

Operative Management

- Treated arthroscopically for Reconstruction of the ACL
- Autograft to Allograft
- - No risk of disease transmission
- - Lower retear rate
- - Heal and incorporates more quickly
- - Harvest site morbidity

Tunnel Placement

- Position the femoral tunnel at either 2 o clock or 10 o clock positions; consistent with the anatomic ACL femoral footprint
- Avoid Too Vertical Tunnel Placement
- More rotational laxity with more Vertical tunnels

Graft Selection

- No graft selection stands out as superior (No significant difference)
- No functional difference in Autograft or allograft have been demonstrated
- Graft choice must be individualized to the patient (Age, and desired level of activity)

Autograft

- Lower risk of disease transmission
- Lower retear rate (<25 yo)
- Heal and incorporates quicker
- Harvest site morbidity

Allograft

- Faster surgery
- Smaller incisions
- Risk for disease transmission

Bone-Patella Tendon-Bone
Hamstring graft

Nailed It Ortho podcast episode

nbonnaig@gmail.com - Dr. Nicolas Bonnaig, MD

- Ig: Naileditortho -

Naileditortho@gmail.com - www.naileditortho.com

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