

# Multiligament Knee Case

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UC Orthopaedics & Sports Medicine  
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## History

- 18 year old HS senior on local class ski trip fell attempting to land a jump about 8:30PM on 2/13 with knee injury requiring ski patrol to remove him from the hill
- Splinted, no neurologic injury noted and road home on the bus
- Mother took him to ED
  - Knee pain and swelling, no real knee instability noted, no motor peroneal n function, normal and symmetric pulses to foot

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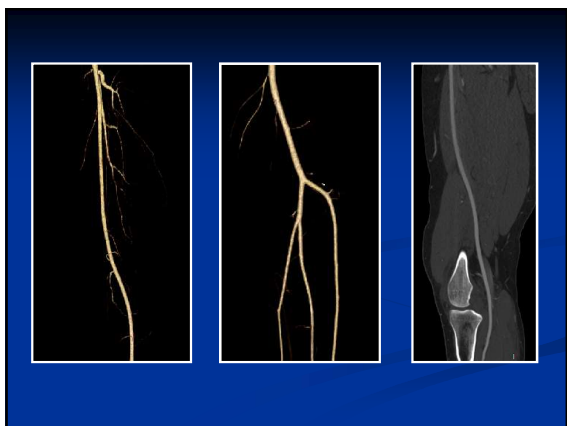
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### Office visit

- Afternoon after evening of injury
- High school senior, aspiring engineer
- Exam-
  - Moderate effusion, + Lachman, marked opening with varus stress at 0° and 30°
  - 2+ DP/PT pulses on R, 2+ DP pulse on L but absent PT
  - No motor AT/EHL, 5/5 plantar flexion
  - Diminished SP, no DP sensation
  - Vascular surgery phone consult
- Plan-Post op brace locked, ABIs, MRI, f/u tomorrow

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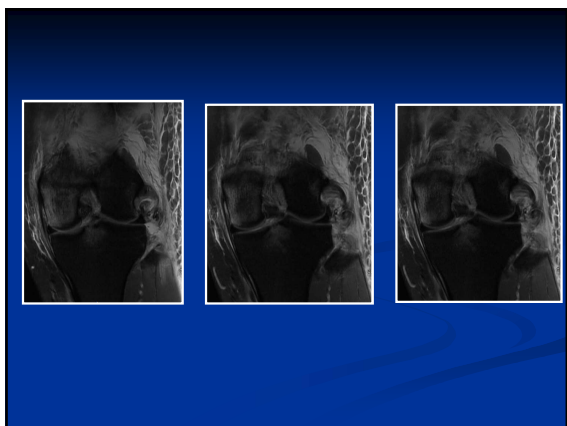
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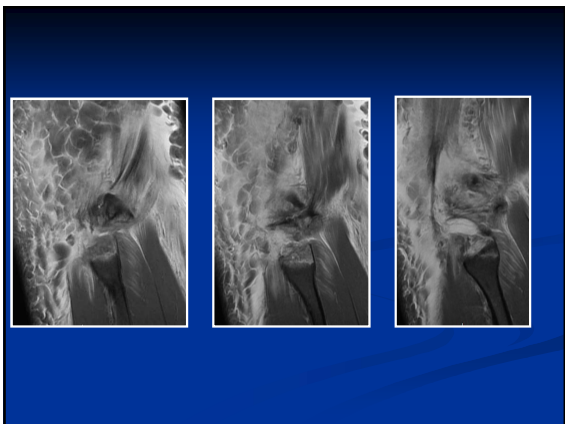
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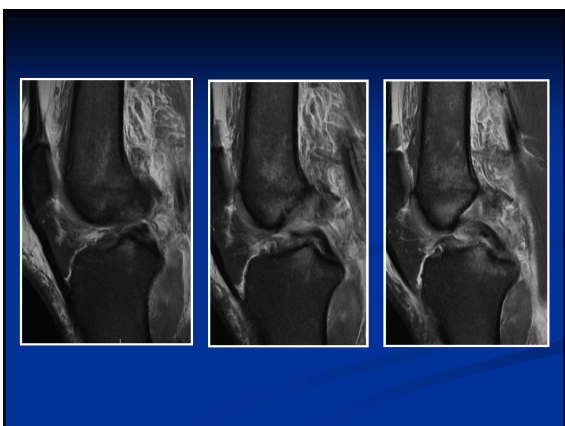
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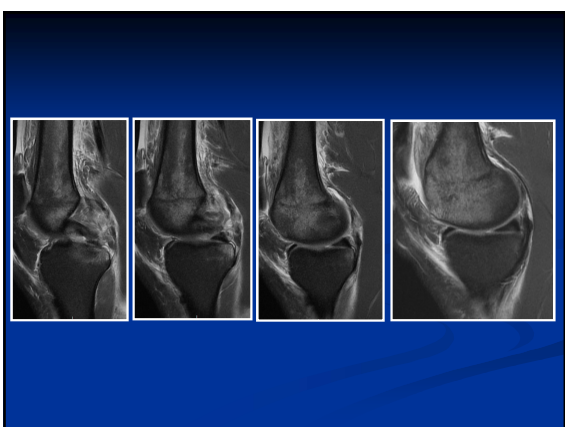
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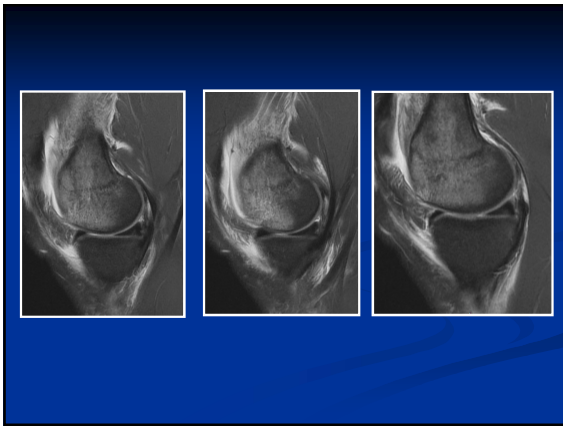
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### Post Injury Day #2

- Normal ABIs
- MRI
  - Complete ACL tear
  - Impaction fx MFC, tibial spine
  - Prox fibula fx/biceps avulsion
  - Insertional injury popliteus
  - Indistinct CP nerve adjacent to fibula fx
  - GH MCL
  - Posterior horn MMT
- Plan
  - Surgery 2/19

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### Surgery

Two circular arthroscopic views of a knee joint during surgery, showing internal structures and surgical instruments.

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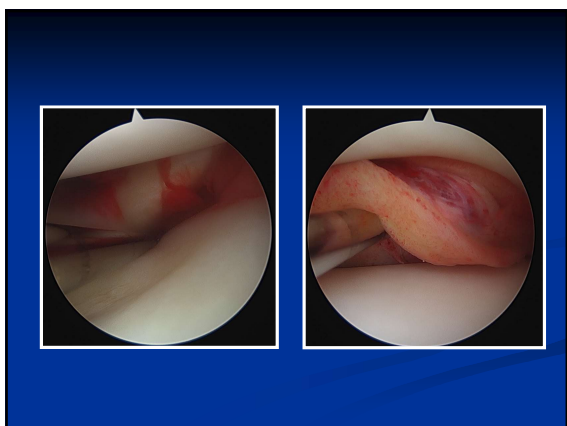
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### Surgery

- Surgery
  - Hybrid ACL-11.5mm fix on femoral side
    - semiT/gracilis auto, semiT allo
  - Tourniquet up
  - Peroneal N exploration/hand surgery eval
  - Popliteus avulsion repair
    - Bioscrew at insertion site-arthroscopically assisted
  - Lateral capsular repair
    - Joint line bioanchors
  - Proximal fibular fracture
    - Suture thru bone/tendon interface thru drill holes in prox fibular, repair biceps slip to prox tibia(reinforces repair)
  - Fix ACL tibial side

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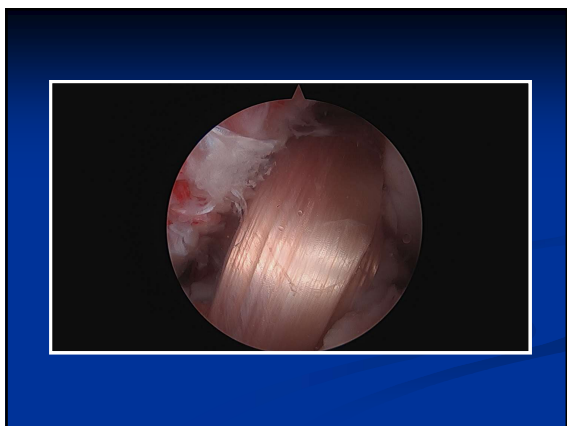
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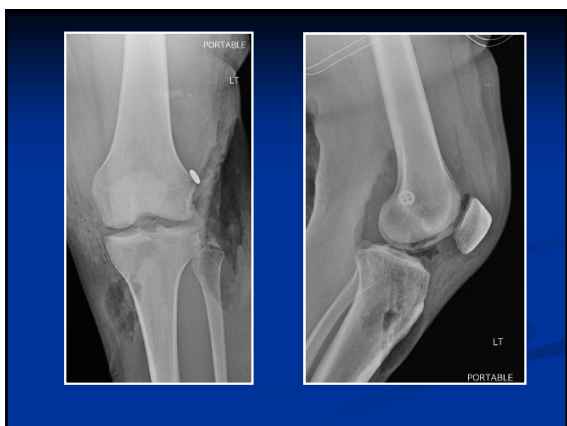
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**Rehab**

- NWB in locked post op brace
- Gentle ROM-0-30°
- Quad sets, heel slides, SLR, isometrics
- ROM exercises foot

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### 1 month

- ROM 0-90°
- No active AT/EHL
- Sensation coming back slowly

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### 2 mos

- Minimal swelling, neg Lachman, great endpoint, no side to side difference with varus stress
- Full passive ROM foot
- 50% WB increase 25% a week



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### 2 mos

- EDX 4/19/19

**Summary:** The left superficial fibular sensory study was unevokable, the left sural was normal. The left common fibular motor study to the EDB was unevokable, but a very small waveform was visible recording over the Tib Ant and simulating below the fibular head, with a similar, very low amplitude waveform present stimulating at the popliteal fossa. A new disposable concentric needle electrode was used and discarded; evaluation of selected extremity muscles showed florid fibrillations and positive waves in the L Tib Ant and Pero Long, but none in the Biceps Femoris (SH), and none in other muscles, 1-2 unstable, intermittently firing voluntary units were seen in the Tib Ant and Pero Long.

**Interpretation:**  
This is an abnormal study. There is electrodiagnostic evidence of a left common fibular neuropathy at or above the takeoff to the Tibialis Anterior, severe, but with evidence of axonal continuity to both the Tib Ant and Peroneus Longus. There is no evidence of other left lower extremity mononeuropathy, plexopathy, or radiculopathy.

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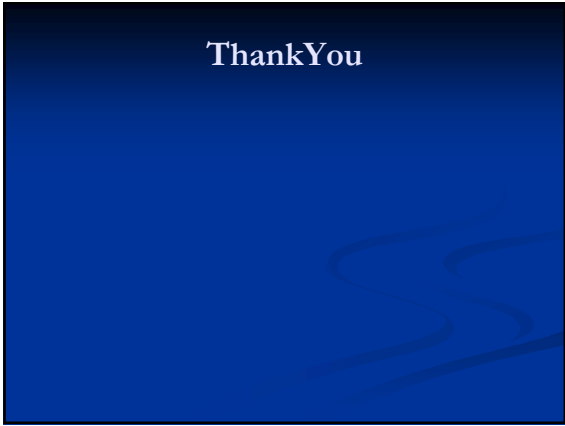
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