


Teamwork: The Key to Positive Outcomes in the Setting of Acute Athletic Injuries


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3/1/2022



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Disclosures/Conflicts of Interest

- None



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Current Employment

- Sports Medicine Physician
 - Assistant Clinical Professor
 - UConn Health Orthopedics and Sports Medicine
- Head Team Physician
 - Woodstock Academy Prep/Boarding High School
- Team Physician
 - UConn Athletes
 - Osteopathic Manual Treatment (OMT) consult service
 - Game float coverage as needed (Men's hockey and Football)
- Medical Director
 - UConn Rec/Club Sports



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Learning Objectives


- Describe the benefits and outcomes of athletic healthcare teamwork in the preparatory school setting
- Summarize recommendations for advancing the athletic trainer as a healthcare professional
- Discuss the dynamic nature of the athletic healthcare team



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Case 1


- 17 y/o female with acute right knee pain related to a fall while snowboarding
- Boarding student → non-athlete → sent by on-campus medical services to our ATC staff for evaluation
- Mechanism described to be a high energy fall while snowboarding
- Initial pain appreciated laterally
- Continued pain with terminal flexion/extension
- No report of bruising or effusion



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Case 1

- Rehab initiated with ATC on campus
- Patient noted to not progress as expected and re-evaluation with ATC noted concerning ACL findings
- Patient brought to me for training room evaluation



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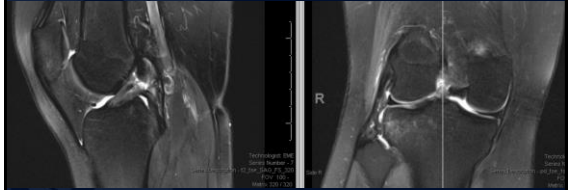
Case 1

- Training room evaluation:
 - Highly guarded exam
 - Positive (2b) Lachman
 - Positive lever test
 - Trace positive lateral McMurray
 - Negative patellofemoral exam
- But what about the old adage, “snowboarders don’t tear their ACL?”

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NOT TRUE!



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Take Home Points

- Prep/boarding school → General sports medicine care
- Caring for a high school boarding student offers several unique challenges
 - No supporting parental history/descriptions
 - The ATC plays a major role for these patients
 - Major player when it comes to the patient support system
- Trust, but verify
 - Do your own exam
 - Trust your exam
 - Trust your gut
- Snowboards can tear their ACL's (1.7% vs 17.2% for skiers)¹
- Lateral knee pain without joint line tenderness → pivot shift bone contusion → CHECK THE ACL

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Case 2

- 15 y/o male evaluated on the field after a football injury
- Patient was tangled with another player while making a tackle
- Immediate severe pain screaming, “I dislocated my knee!”
 - Patellofemoral dislocation vs complete knee dislocation

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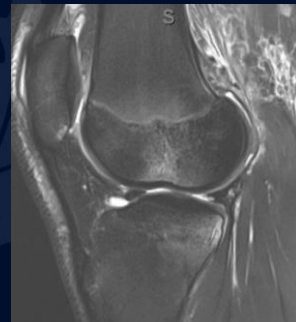
Case 2

- ATC gets the patient first and realizes that the patient is unable to straighten his knee
- My initial evaluation notes a knee stuck at 90 with a strange externally rotated position of the tibia relative to the femur
 - No evidence of patellar dislocation
- Firm pressure was applied to the posterior/lateral knee while guiding the knee to extension
 - Immediate relocation was achieved with pain immediately improved
 - Distal sensation and pulses normal
- Athlete splinted in extension and sent via ambulance to local ER

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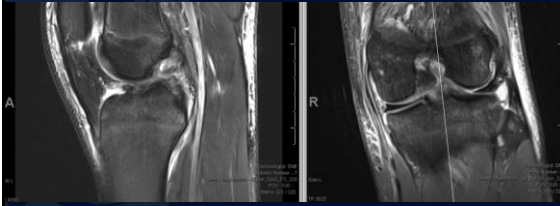
Atypical Bone Bruising Pattern



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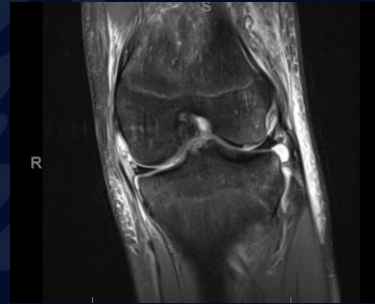
Full thickness ACL tear



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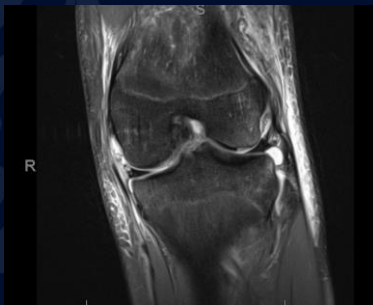
Medial and lateral posterior meniscal tears with capsular separation



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Full thickness tearing of the LCL and the Popliteus tendon off their insertions on the lateral femoral condyle



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Case 2

- Initial presentation in ER
 - Negative CTA of the lower extremity
- Athlete underwent successful surgery
 - ACL reconstruction
 - Posterior lateral corner reconstruction
 - Lateral meniscal repair with additional capsule repair

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Case 2

- Athlete was very hesitant to move the knee post surgery
 - Quickly fell behind with rehab
- Later, he reported significant symptoms of depression
 - Weight loss
 - Hard for him to look at himself in the mirror
- As it currently stands:
 - Psychotherapy has been a great success
 - He continues to struggle with stiffness s/p surgery
 - Arthroscopic debridement remains on the table pending continued response with PT

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Case 2

- Multi-ligament knee injuries
 - There is a 9-15% incidence of tearing both menisci with an ACL tear²
 - 15% of ACL injuries have an associated PLC injury that also requires reconstruction³
 - Prevalence of depression in the general population = 9%
 - Those undergoing ACL reconstruction = 23-42%⁴

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Case 2

- Take home points
 - Clear and well-communicated roles for serious injury management
 - Offering the family multiple points of contact with both myself and the school's athletic trainer
 - Regular follow up in clinic & on campus
 - Immediate mobilization of on-campus mental health services when needed

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Case 3

- 10 minutes after case 2, brother decides to join the "fun"
- Defensive play resulting in a huge hit delivered by our eventual patient
- Play finishes with him running off the field with a "dead arm"

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Case 3

- ATC evaluation immediately notes a positive sulcus sign
- My evaluation confirms an anterior glenohumeral dislocation
- ATC immediately supports the athlete by sitting behind him on the table, massaging the deltoid and promoting an upright seated posture
- Shoulder is then successfully relocated on the first attempt with downward traction on a flexed elbow with slow external rotation

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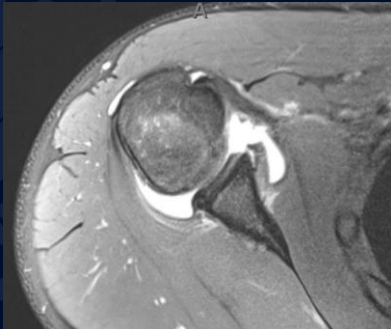
Case 3

- Regarding the shoulder dislocation
 - First time dislocation
 - No prior subluxation events
 - Highly motivated to return to athletics ASAP
 - Senior season, primary sport

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ALPSA lesion confirmed on MRI

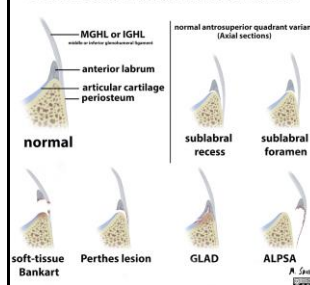


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Case 3

Glenoid labrum tears



- ALPSA Lesion⁵
 - Detachment of the anteroinferior labrum from the glenoid
 - The scapular periosteum is unruptured but widely lifted or stripped
 - Labrum remains attached to the periosteum

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Case 3

- For adolescents/young adults with a first-time dislocation
 - ~90% lifetime risk of recurrent instability⁶
- Patient-centered decision making
 - Athlete trialed a Sully brace
 - Successful surgery after the football season
 - 6 months before return to contact sports



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Case 3

- ATC was invaluable in the success of this case
 - Close monitoring for shoulder stability
 - Compliance with rehab/Sully brace
 - Position recommendations with coaching staff
 - Quick follow up once season was over for surgery
 - Post op rehab follow up/compliance monitoring



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Prep/Boarding School Experience

- Immersive experience, especially for the ATC
- General ortho complaints with acute athletic injuries
- Increase stress within the prep teams
 - Students will opt for a 5th year of high school to attempt to get "re-recruited"
 - High stakes year
- Parents not usually available for assist with history
- Recipe for success
 - Streamlined access to high levels of care
 - Regular exposure/training room time where ATC/Doc can review cases/injuries
 - COMMUNICATION



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References

1. Kim S, Endres NK, Johnson RJ, Ettlinger CF, Shealy JE. Snowboarding injuries: trends over time and comparisons with alpine skiing injuries. *Am J Sports Med.* 2012 Apr;40(4):770-5. doi: 10.1177/0363546511433279. Epub 2012 Jan 20. PMID: 22268231.
2. Keyhani S, Esmailnejad AA, Mirhoseini MS, Hosseinijad SM, Ghanbari N. The Prevalence, Zone, and Type of the Meniscus Tear in Patients with Anterior Cruciate Ligament (ACL) Injury: Does Delayed ACL Reconstruction Affects the Meniscal Injury?. *Arch Bone Jt Surg.* 2020;6(3):432-438. doi:10.22038/abs.2019.39094.2076
3. Dean RS, LaPrade RF. ACL and Posterolateral Corner Injuries. *Curr Rev Musculoskelet Med.* 2020;13(1):123-132. doi:10.1007/s12178-019-09581-3
4. Guo EW, Cross AC, Hessburg L, et al. The Presence of Preoperative Depression Symptoms Does Not hinder Recovery After Anterior Cruciate Ligament Reconstruction. *Orthopaedic Journal of Sports Medicine.* January 2021. doi:10.1177/2325987120970219
5. https://radiopaedia.org/articles/atl-shoulder-dislocation?lang=us&from=article_text&from_title=atl-shoulder-dislocation; Case courtesy of Dr Matt Skalski. Radiopaedia.org. rID: 22638
6. Olds MK, Ellis R, Parmar P, et al/Who will redislocate his/her shoulder? Predicting recurrent instability following a first traumatic anterior shoulder dislocation. *BMJ Open Sport & Exercise Medicine* 2019;5:e000447. doi: 10.1136/bmjsem-2018-000447



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Woodstock Academy Enlists UConn Sports Medicine Expertise

Athletes have access to sports medicine physicians, athletic trainers, physical therapists and other kinesiology specialists



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