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

Zac Maass DO, CAQSM
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Disclosures/Conflicts of Interest
• None

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 Athletics
  – Osteopathic Manual Treatment (OMT) consult service
  – Game float coverage as needed (Men’s hockey and Football)
• Medical Director
  – UConn Rec/Club Sports

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

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

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
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?"

NOT TRUE!

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
- Trust, but verify
  - Do your own exam
  - Trust your gut
- Snowboards can tear their ACL’s (1.7% vs 17.2% for skiers)
- Lateral knee pain without joint line tenderness → pivot shift bone contusion → CHECK THE ACL

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

- 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

Atypical Bone Bruising Pattern
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

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

Case 2

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

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”

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

Case 3

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

Case 3

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

ALPSA lesion confirmed on MRI

Glenoid labrum tears

- Normal labrum
- Anterior labrum
- Articular cartilage
- Periosteum

- Sublbral recess
- Sublbral foramen

- ALPSA
- Perthes lesion
- GLAD
- ALPSA

ALPSA Lesion

- Detachment of the anteroinferior labrum from the glenoid

- The scapular periosteum is unruptured but widely lifted or stripped

- Labrum remains attached to the periosteum
Case 3

- For adolescents/young adults with a first-time dislocation
  - ~90% lifetime risk of recurrent instability

- Patient-centered decision making
  - Athlete trialed a Sully brace
  - Successful surgery after the football season
  - 6 months before return to contact sports

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

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

References