Sports Injuries in the Elbow:
Lateral Collateral Ligament Reconstruction
for Chronic Instability

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Elbow Curriculum at ISAKOS Shanghai

Sports Injuries in the Athlete - Chair: Luigi Pederzini, MD
Tendon & Ligament Injuries in Athletes - Luke Oh, MD, Mike Freehill, MD
(Tuesday, June 6, 3:30pm)

Cartilage Injury (OCD) in Skeletally Immature Athletes - Luke Oh, MD
(Osseous Injury in Skeletally Immature Athletes - Michael Freehill, MD
(Monday, June 5, 11:30am)

The Stiff Elbow Symposium - Chair: Luigi Pederzini, MD
Arthroscopic Approach - Luke Oh, MD
(Tuesday, June 6, 4:30pm)

Disclosures
No financial disclosures relevant to this presentation.
Committee Service: AAOS, AOSSM, AANA, ESSKA, ISAKOS, NESES

Elbow Dislocation in Sports

Classic Literature
O’Driscoll, Krom, Korinek, An.
Elbow Dislocation and Dislocation: A Spectrum of Instability.
CORR 1992; 280: 186-197
- Sequential release of ligaments/capsule in 13 fresh autopsy specimens
- Progression of tissue capsuloligamentous disruption as a circle
- Final stage of dislocation: disruption of the aMCL (anterior bundle MCL)
- If the elbow is stable to valgus in PRONATION, the aMCL can be assumed to be intact

Case Presentation

• HPI
- 57 y/o RHD F who sustained fall downstairs while sleepwalking.
- Attempted reduction in local emergency room and placed in long-arm, posterior splint

• Fluoroscopic Exam Under Anesthesia
- Posterolateral dislocation with severe posterolateral rotary instability
- Lateral joint line gap of >1 cm with valgus stress
- No significant medial side gapping with valgus stress
- Elbow dislocation easily with supination and extension beyond 45 deg

Posterolateral Pivot Shift

Fluoroscopic EUA

- Stability throughout flexion and extension with forearm in supination, neutral, and pronation.
- If the elbow remains congruous from approximately 30° to full flexion in one or more positions of forearm rotation, repair of the MCL is not necessary (McKee et al., 2005).
MCL Repair

- Indication: Continued instability after lateral stabilization
- Rarely needed
  - Pugh et al. (2004): 6/36 patients
  - Forthman et al. (2007): “MCL repair is unnecessary if the articular fractures and the LCL are repaired or reconstructed.” Did not repair MCL in any patient; 2/34 elbow fx-dislocations had post-op instability related to noncompliance.
  - MCL usually heals or scars if the elbow is otherwise stable.
  - Technique: suture anchors or transosseous sutures through the medial epicondyle.

Literature Review

  - Repair/reconstruction of UCL frequently reestablishes stability (radial head acts as secondary stabilizer to valgus instability)
  - Most studies report on chronic PLRI

Thank You

Roger van Riust, MD
Greg Bain, MD
Luigi Pederzini, MD