

# “To Reduce or Not Reduce: Is That A Question?”

Derek A. Woessner MD, FAAFP

Lehigh Valley Health Network, Derek.Woessner@lvhn.org

Christina Goral MS, ATC

Lehigh Valley Health Network, Christina\_L.Goral@lvhn.org

Follow this and additional works at: <http://scholarlyworks.lvhn.org/family-medicine>



Part of the [Sports Medicine Commons](#)

---

## Published In/Presented At

Woessner, D. A., Goral, C. (2017, May). “To Reduce or Not Reduce: Is That A Question?”. Poster presented at: the American Medical Society for Sports Medicine, San Diego, CA.

This Poster is brought to you for free and open access by LVHN Scholarly Works. It has been accepted for inclusion in LVHN Scholarly Works by an authorized administrator. For more information, please contact [LibraryServices@lvhn.org](mailto:LibraryServices@lvhn.org).



# “To Reduce or Not Reduce: Is That A Question?”

Derek A. Woessner, MD, FAAFP

Christina Goral, MS, ATC

Lehigh Valley Health Network, Department of Family Medicine, Division of Sports Medicine, Allentown, PA

## Patient Presentation:

- ❖ First game of the high school football season
- ❖ 16-year-old player had his left arm extended as he grabbed the opposition's jersey
- ❖ Subsequently fell onto his outstretched left arm



## Physical Exam:

**GEN:** Distressed, C/o Left elbow pain

**MSK:** Inspection revealed shortened forearm with the athlete holding his left arm in flexion.

A palpable sulcus was noted over his triceps insertion.

Distal N/V intact.



## Differential:

- ❖ Fracture/Dislocation of the Ulna &/or Radius
- ❖ Capsule Ligament Sprain
- ❖ UCL/RCL Sprain
- ❖ Biceps and/or Triceps Tendon Strain
- ❖ Humeral Shaft Fracture

## Tests and Results:

- ❖ Three views of the elbow obtained → dislocation of the proximal radius and ulna with respect to the humerus. No associated fracture.
- ❖ Post reduction 2 views → satisfactory reduction of previously noted posterior dislocation.

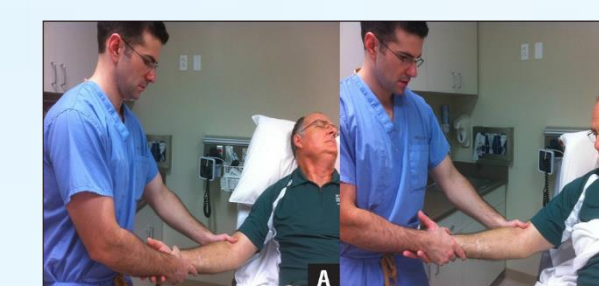


## Final Diagnosis:

*Posterior Elbow Dislocation*

## Treatment and Outcome:

- ❖ Player's significant pain: sideline closed reduction not attempted.
- ❖ Arm was splinted and the player was transported to the hospital.
- ❖ Elbow was reduced under conscious sedation.



The traditional elbow reduction method uses traction and counter-traction with the physician's 2 hands.

## Discussion/Follow-up:

- ❖ Initial evaluation of the athlete → integrity of the bony elements and neurovascular structures should be assessed.
- ❖ Assessing for neurovascular compromise (paresthesias in the distal median and ulnar nerve distribution and integrity of the radial pulse) is paramount.
- ❖ Suspicion for bony injury of the distal humerus or the proximal radius → sideline reduction should be avoided, unless there is significant neurovascular compromise.
- ❖ Case highlights the question of whether sideline closed reduction should be performed for posterior elbow dislocation.
- ❖ Sideline closed reduction may be attempted when the following criteria are met: technique is “gentle”, technically sound, minimal attempts, and tolerated by the athlete.

## Return To Activity:

- ❖ No set return-to-play guidelines for posterior elbow dislocations.
- ❖ In this case, approximately eight weeks from his injury, which included twice-weekly occupational therapy sessions, the player returned to football with a hinged orthosis.



1. Blackard D, Sampson J. Management of an uncomplicated posterior elbow dislocation. J Athl Train. 1997;32(1):63-67.  
2. Nirschl R, Kraushaar B. Assessment and Treatment Guidelines for Elbow Injuries. PhysSportsmed. 1996;24(5):43-60.

© 2014 Lehigh Valley Health Network