

# Olecranon Epiphyseal Fracture and UCL Tear in College Baseball Athlete

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## Abstract

In this study, the athlete reported to the athletic training room following throwing stating he had sharp pain in the posteromedial aspect of his right elbow. Clinical evaluation and imaging revealed UCL sprain. Athlete was scheduled to undergo UCL reconstruction surgery for 4 weeks after the injury and was ordered to discontinue baseball activities. 3 weeks after scheduling UCL reconstruction surgery, athlete reports back to athletic trainer after hearing an audible “pop” in the posterior aspect of the right elbow joint while doing a handstand push-up activity. Clinical evaluation and imaging revealed displaced fracture of previous nonunion of olecranon epiphyseal plate.

## Background

- 19-year old male
- Right hand dominant
- Sophomore collegiate baseball pitcher
- Previous history of olecranon epiphyseal stress fracture in right elbow two years prior

## Differential Diagnosis

- UCL sprain
- Olecranon epiphyseal fracture

## Clinical Evaluation

- Point tender medial epicondyle and
- Point tender on olecranon process
- Positive valgus stress test
- Positive valgus extension overload test
- Diffuse edema in posterior aspect of elbow joint

## Treatment

Athlete was initially scheduled for UCL reconstruction following confirmation of the presence of a UCL sprain. After sustaining the nonunion olecranon epiphyseal fracture, the UCL reconstruction surgery was postponed and ORIF was scheduled to repair the fracture. The athlete underwent rehabilitation for 4 months. The athlete was then rescheduled for UCL reconstruction and underwent rehabilitation for 8 months before returning to full baseball activity without complaints.

## References

Mauro, C. S., Hammoud, S., & Altchek, D. W. (2011). Ulnar collateral ligament tear and olecranon stress fracture nonunion in a collegiate pitcher. *Journal of Shoulder and Elbow Surgery*,

## Uniqueness

Olecranon stress fractures are the 4th most common behind tibial, costal, and metatarsal stress fractures. The literature does not offer strong evidence of a correlation between UCL and olecranon epiphyseal injury. Their coinciding onset, however, does raise questions on a connection between the two injuries. Both injuries can be chronic in onset and caused by a valgus extension overload mechanism that naturally occurs during the baseball throwing motion.

## Conclusion

This case highlights the diagnosis and treatment of a baseball athlete presenting with simultaneous UCL tear and nonunion olecranon epiphyseal fracture resulting from two separate occasions. This case further highlights the incidence of concurrent injury of these 2 structures and a need for more research on their possible correlation. Ultimately, this case draws awareness to possibility of simultaneous injury to the UCL and olecranon process. This should be a consideration during the evaluation of posteromedial elbow pain.