Shoulder Instability in Athletes
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Define shoulder instability and identify the most common causes of shoulder instability in athletes.

Shoulder instability encompasses a wide spectrum, from complete dislocations that require manual reduction to micro-instability in throwers. When we looked prospectively at West Point cadets, we found that 80% of instability events were subluxations (no manual reduction performed). We found that even first-time traumatic subluxation events could cause Bankart lesions (transient luxations) similar to complete dislocations. Therefore, we recommend a high index of suspicion for subluxations and early magnetic resonance imaging in athletes.

Shoulder instability is common in athletes, and the incidence increases with the amount of player contact. Therefore, the highest rates have been reported in the collision sports: football, hockey, rugby, and wrestling.

What are the symptoms of shoulder instability?
Most patients presenting in a delayed fashion report a history of a manual reduction maneuver. Subluxation events are often difficult to discern because patients may report their shoulder shifting or slipping out or may report only pain at the time of injury. It is critical to elicit the sport, position played, and position of the arm at the time of injury to help determine the injury mechanism. Complete dislocations require emergent reduction on the sideline or in the emergency room.

How do you evaluate patients for shoulder instability?
A thorough history is as important as a physical examination. I start with a neurovascular examination, inspection of the scapulothoracic motion, rotator cuff assessment, and measures of ligamentous laxity (modified Beighton score). The apprehension and relocation signs are sensitive for anterior instability, as well as the posterior apprehension and jerk tests for posterior instability. The load and shift test is performed in all directions.

The Gagey test can also be helpful, especially in cases of suspected humeral avulsion of the inferior glenohumeral ligament lesions. This is performed with the patient in the seated position with the scapula stabilized by the examiner. The arm is passively abducted by the examiner’s other hand. An intact inferior glenohumeral ligament should stop abduction near 90°. A pathologic examination is abduction past 105°.

What role does imaging play in the diagnosis of shoulder instability?
We obtain standard anteroposterior and West Point axillary radiographs and prefer noncontrast magnetic resonance imaging.

In this issue of ORTHOPEDICS, Dr Brett D. Owens discusses the causes of and treatment options for shoulder instability in athletes.

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if the injury is acute (contrast is preferred if presentation is more than 2 weeks from injury). A computed tomography scan is obtained if a large bony Bankart lesion or any question of bone loss exists on radiographs or magnetic resonance images.

What surgical and nonsurgical options are available for the treatment of shoulder instability?

The classic procedure for surgical stabilization is an open Bankart repair. Over the past 20 years, we have transitioned to arthroscopic Bankart repair. However, recent appreciation of bone deficiency has renewed interest in open procedures, namely the Latarjet coracoid transfer. Most surgeons prefer an arthroscopic Bankart repair as the first-line treatment.

Although there was some initial enthusiasm about immobilization in external rotation, results reported by Itoi et al have been reproduced. Functional rehabilitation can have good results in patients who have a low risk for recurrence.

Do differences exist in outcomes for athletes vs nonathletes treated for shoulder instability?

Athletes tend to have higher outcome scores after surgical stabilization, but also have a higher rate of subsequent recurrence and failure.

What are the guidelines for return to sport after treatment for shoulder instability?

Little literature supports the return-to-play guidelines we use. More research needs to be done in this area. We know that patients with first-time anterior dislocations without a large bony Bankart lesion or bone loss can usually return to sports within 3 weeks with a rehabilitation protocol. However, this is sport and position dependent. We still do not know how to counsel athletes about the risk each subsequent dislocation or subluxation has on the shoulder. Recurrence or inability to perform at their position usually suggests that surgical stabilization is indicated.

What preventative measures, if any, can reduce the risk of shoulder instability?

Little work has been done in shoulder instability prevention. Our recently completed 4-year prospective trial found many factors associated with instability; however, easily modifiable risk factors have remained elusive.

What progress has been made in the treatment of shoulder instability?

The biggest progress has been an improved understanding that a single procedure may not be appropriate for all patients. 

The Instability Severity Index score is helpful in quantifying the failure risk with arthroscopic repair and can be used in screening high-risk patients. The renewed interest in open procedures, such as the Latarjet procedure, has helped the management of revision patients.

What does the future hold for the treatment of shoulder instability?

Hopefully, it will involve methods of primary prevention or improved bracing for athletes and the continued development of bony augmentation procedures that are reproducible, safe, and possibly arthroscopic.

REFERENCES


