

Uncommon Shoulder Dislocations

Shoulder dislocations are not uncommon. Most dislocate forward (called an anterior dislocation). Less often are the posterior shoulder dislocations. As the name suggests, a posterior shoulder dislocation occurs when the head of the humerus (upper arm bone) pops backwards out of the shoulder socket.

What causes posterior shoulder dislocation and who is affected most often? How is it treated and what are the results? These are the questions answered by this study.

Orthopedic surgeons from The Shoulder Injury Clinic in England took the time to look back at their medical records to find 112 patients with posterior shoulder dislocations. By reviewing the charts, they were able to put together a picture of what those patients looked like (called patient demographics). By analyzing the data collected, they were able to identify predictive factors for high- and low-risk of complications.

The most common complication following posterior shoulder dislocation was recurrent instability. Recurrent instability means the shoulder dislocated a second time or the shoulder could slip in and out of the joint (called subluxation). They found that when the force of the first dislocation was enough to damage the head of the humerus, the risk of a second dislocation (or recurrent subluxation) went up dramatically.

Other risk factors for recurrent dislocations were age (younger age -- less than 40) and seizure as a cause of the first dislocation. In more than half the cases of recurrence in this group, the second dislocation also occurred during a seizure. Evidently, the force of shoulder muscle contractions during the seizure is enough to pull the shoulder out of joint.

Patients least likely to suffer a second (recurrent) posterior shoulder dislocation were older, suffered a traumatic first dislocation, and had only a small defect or lesion of the humeral head from that first injury. Traumatic injuries were linked with car accidents, falls, and in a few cases, sports injuries.

This picture of the patient at risk for future posterior shoulder dislocations is new. Because of the size of this study (112 patients with 120 dislocations), the authors were able to create a more complete picture of patient demographics never before realized. And they were able to show long-term outcomes for patients who were treated but who still developed recurrent instability.

Let's take a look at the type of treatment and treatment results reported in this study. First of all, the patients included in the study had an acute posterior dislocation. That means they were evaluated within the first 10 days after the first dislocation occurred.

All shoulders were reduced (relocated or put back in the socket) in one of three ways. One-third (33 per cent) were reset using sedation (to relax the patient) and traction (pulling the arm down). If that didn't work, then gentle manipulation was used by raising the arm to 90 degrees of flexion, inwardly rotating the shoulder, and moving the arm toward the body. In a small number of patients (five total), general anesthesia was needed. Once the patient was asleep, full muscle relaxation made it possible to reduce the shoulder.

Follow-up treatment consisted of wearing a sling for four weeks along with gentle movement exercises. Once the sling was removed, then the patients went to Physical Therapy for a 12-week program of joint motion and strengthening exercises. If the shoulder dislocated again, then a longer Physical Therapy program was needed. In some cases, surgery to repair the torn soft-tissues and bone lesions was needed to restore shoulder stability.

What were the final results? Patients were followed at regular intervals for up to two years. They were tested and retested using valid and reliable tools such as the Western Ontario Shoulder Instability Index (WOSI), Disabilities of the Arm, Shoulder, and Hand Score (DASH), and the Short Form-36 (SF-36).

Even with treatment, all patients still showed loss of normal shoulder movement and function two years after the injury. The authors commented that it may be the case that all posterior shoulder dislocations would do better with surgery rather than conservative care. They are investigating this theory.

In general, posterior shoulder dislocation is a rare type of injury and must be studied more closely. With more information, it may be possible to prevent such injuries (and certainly recurrent dislocations) by recognizing and reducing risk factors whenever possible.

For those patients who are not at risk of recurrent dislocation, mild deficits in function may be acceptable. They may be able to get along just fine without surgery to repair damage done to the shoulder as a result of the dislocation. Those individuals who are at risk for another dislocation may do better with early surgical intervention. Future studies are needed to prove or disprove that idea.

Reference: C. Michael Robinson, BMedSci, FRCSEd(Orth), et al. The Epidemiology, Risk of Recurrence, and Functional Outcome After an Acute Traumatic Posterior Dislocation of the Shoulder. In *The Journal of Bone and Joint Surgery*. September 7, 2011. Vol. 93-A. No. 17. Pp. 1605-1613.

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